

Office of the Secretary Washington DC 20420

In Reply Refer To: **00REG**

July 30, 2020

Subject: Economic Regulatory Impact Analysis for RIN 2900-AQ48(F), Program of Comprehensive Assistance for Family Caregivers Improvements

I have reviewed this rulemaking package and determined the following.

- 1. VA has examined the economic, interagency, budgetary, legal, and policy implications of this regulatory action and has concluded that it is an economically significant rule under Executive Order 12866.
- 2. This regulatory action is also a major rule under the Congressional Review Act, because it is likely to result in an annual effect on the economy of \$100 million or more.
- 3. This rulemaking will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act, 5 U.S.C. 601-612.
- 4. This rulemaking is not likely to result in the expenditure of \$100 million or more by State, local, and tribal governments, in the aggregate, or by the private sector, in any one year, under the Unfunded Mandates Reform Act of 1995, 2 U.S.C. 1532.
- 5. Attached please find the relevant regulatory impact analysis document dated July 30, 2020.

Approved by:

Nicole Korkos Chief Economist Office of Regulation Policy & Management (00REG) Office of the Secretary

Regulatory Impact Analysis for RIN 2900-AQ48(F)

Title of Regulation: Program of Comprehensive Assistance for Family Caregivers Improvements

Purpose: To determine the economic impact of this rulemaking.

Statement of Need: The Caregivers and Veterans Omnibus Health Services Act of 2010 (P.L 111-163) established 38 U.S.C. 1720G, which directed the Department of Veterans Affairs (VA) to establish a Program of Comprehensive Assistance for Family Caregivers (PCAFC) and a Program of General Caregiver Support Services (PGCSS). Both programs are managed by the VA's Caregiver Support Program (CSP) Office. On June 06, 2018, the President signed into law the VA Maintaining Systems and Strengthening Integrated Outside Networks (MISSION) Act of 2018 or the VA MISSION Act 2018 (P.L. 115-182). The VA MISSION Act of 2018 will fundamentally transform elements of the Department of Veteran Affairs' (VA) healthcare system to include expansion of the PCAFC within the CSP (38 U.S.C. 1720G; 38 CFR Part 71).

The intent of this rulemaking is to implement changes required by section 161 of the VA MISSION Act of 2018, improve PCAFC, and to ensure consistency in how PCAFC is administered across VA.

Summary: The Department of Veterans Affairs (VA) adopts as final, with changes, a proposed rule to revise its regulations that govern VA's Program of Comprehensive Assistance for Family Caregivers (PCAFC). This final rule makes improvements to PCAFC and updates the regulations to comply with the recent enactment of the VA MISSION Act of 2018, which made changes to the program's authorizing statute. This final rule allows PCAFC to better address the needs of veterans of all eras and standardize the program to focus on eligible veterans with moderate and severe needs.

Benefits: This rulemaking implements Sections 161-163 of the MISSION Act of 2018, by expanding the CSP specifically the PCAFC. This program will serve all service era Veterans' family caregivers by providing stipend payments, enhanced respite care, mental health services, benefits travel, and CHAMPVA to those who are eligible.

Additionally, this rulemaking will strengthen consistency and validity within PCAFC by revising eligibility requirements and revising definitions for clarity. PCAFC will be able to address the unique needs of eligible veterans regardless of service era.

This rulemaking would require participating family caregivers and their eligible veterans participate in annual reassessments, wellness visits, and engage in all requirements of the program. We would revise the process for revocation and discharge from PCAFC.

This rulemaking would also make several improvements to PCAFC and would update the regulations to comply with the recent enactment of the VA MISSION Act of 2018,

which made several changes to the program's authorizing statute. The proposed changes would allow PCAFC to address the needs of eligible veterans of all eras and standardize the current program to focus on veterans with moderate and severe needs.

Estimated Impact: VA has determined the budget impact to be \$484.44 million in FY 2021 and \$5.42 billion over the 5-year period ending in FY 2025. Transfers will be \$389.32 million in FY 2021 and \$4.93 billion over 5 years. Costs will be \$95.11 million in FY 2021 and \$431.22 million through FY 2025.

Table 1: Budget Impact

Fiscal Year	Net Transfers	Total Costs	Budget Impact
2021	\$389,324,942	\$95,116,658	\$484,441,600
2022	\$679,984,302	\$60,285,311	\$740,269,613
2023	\$1,025,418,480	\$108,192,146	\$1,133,610,626
2024	\$1,342,762,483	\$119,630,863	\$1,462,393,346
2025	\$1,496,738,729	\$100,209,285	\$1,596,948,014
5-Yr Total	\$4,934,228,937	\$483,434,263	\$5,417,663,199

This rulemaking is considered an EO 13771 regulatory action. VA has determined that the net costs are \$483.4 million over a five-year period and \$70.5 million per year on an ongoing basis discounted at 7 percent relative to year 2016, over a perpetual time horizon.

Transfers: Transfers will be \$389.3 million in FY 2021 and \$4.9 billion over 5 years.

Table 2: Net Transfers

Fiscal Year	Stipend Amount	Health Care	Financial and Legal Services	Transportation	Net Transfers
2021	\$354,783,284	\$28,358,696	\$5,762,665	\$420,297	\$389,324,942
2022	\$630,899,507	\$41,538,044	\$7,023,662	\$523,089	\$679,984,302
2023	\$954,386,335	\$61,476,285	\$8,893,313	\$662,547	\$1,025,418,480
2024	\$1,252,848,691	\$78,799,278	\$10,342,479	\$772,035	\$1,342,762,483
2025	\$1,399,632,107	\$85,434,571	\$10,858,739	\$813,312	\$1,496,738,729
5-Yr total	\$4,592,549,925	\$295,606,874	\$42,880,859	\$3,191,279	\$4,934,228,937

Stipend amount

Table 3: Stipend Summary Impact Table

Fiscal Year	Expanded Population	Post-9/11 Population	Discharge by Request	Total Stipend Impact (Transfers)
2021	\$298,231,276	\$36,167,928	\$20,384,080	\$354,783,284
2022	\$640,064,535	(\$33,522,824)	\$24,357,796	\$630,899,507
2023	\$991,687,206	(\$69,090,536)	\$31,789,664	\$954,386,335
2024	\$1,289,647,462	(\$72,444,819)	\$35,646,049	\$1,252,848,691
2025	\$1,438,208,249	(\$75,960,726)	\$37,384,585	\$1,399,632,107
5-Yr Total	\$4,657,838,727	(\$214,850,977)	\$149,562,174	\$4,592,549,925

Expanding eligibility¹

VA is projecting a transfer payment of \$298 million in 2021 and \$4.7 billion over five years due to expanding eligibility.

Based on new eligibility criteria proposed in this rulemaking, table 4 details the expected annual enrollment of unique pre 9/11 veteran sponsors² and the associated transfers. Projections provided by VA Enrollment and Forecasting utilized several data sources to include historical enrollment rates for Post 9/11 Veterans, National Center for Veterans Analysis and Statistics Veteran Population (VetPop) data, and VA Enrollee Health Care Projection Model (EHCPM) trends. This data was then adjusted using a two-phase expansion in which the VA first expands PCAFC eligibility to those Veterans injured prior to May 1975 (the end of the Vietnam War) and post September 11, 2001. Two years later, the VA then will expand PCAFC to Veterans injured from all eras. A program ramp-up of 40%, 70%, and 90% for each phase of the PCAFC program expansion was also assumed. Thus, the first and second phase will reach full enrollment (i.e., 100%) in FY 2025 and FY 2027, respectively.

Table 4: Estimate of Expanding Stipends Benefits to Pre-9/11 Veterans (Transfer)

Fiscal Year	Pre- Vietnam	Vietnam	Post- Vietnam	Total Expanded Unique Sponsor Counts	Pre-Vietnam	Vietnam	Post- Vietnam	Total Expanded Population Stipend (Transfer)
2021	6,829	13,551	0	20,380	\$100,378,738	\$197,852,538	\$0	\$298,231,276
2022	10,644	23,178	0	33,822	\$202,340,440	\$437,724,094	\$0	\$640,064,535

¹ Please see Appendix A PCAFC BY19 PCAFC Projection Model for a further detailed explanation of the assumptions and methodology used to project the enrollment rates of eligible Veterans and service members.

² Veteran is described as Unique Sponsor in this document. This is consistent with Appendix A PCAFC Projection Model language.

2023	12,162	28,851	8,871	49,884	\$255,494,244	\$602,258,874	\$133,934,088	\$991,687,206
2024	11,980	31,061	15,517	58,559	\$276,230,451	\$711,778,878	\$301,638,132	\$1,289,647,462
2025	10,491	29,927	20,009	60,428	\$262,820,561	\$745,327,744	\$430,059,943	\$1,438,208,249
5-Yr Total					\$1,097,264,435	\$2,694,942,129	\$865,632,164	\$4,657,838,727

Veterans no longer eligible

Based on new eligibility criteria in this rulemaking, it is assumed that all tier 1 unique Veteran sponsors will no longer be eligible as well as 2% of tier 2 and 3 unique Veteran sponsors. The assumptions are based on presumed level of need and less than 70% combined disability rating. Projections provided by Enrollment and Forecasting were used to analyze the transfer savings of this action. The projections include a transition period of 17 months in which the impacted veterans will continue to collect their current stipend. Transfer savings are reflected after the 17-month transition period. Table 5 shows the annual impact of this policy and Table 6 shows the annual number of Veterans affected.

BLS to GS Rate Change³

As a result of transition to OPM's GS 4 Step 1, approximately 4,504 family caregivers would experience a decrease in monthly stipend payments. For the family caregivers that would receive a decrease, each would continue to receive his/her current monthly stipend rate for 14 months (12 months with 60 days due process) and on month 15 begin to receive the new GS 4 Step 1 rate in the geographic region. For instance, a family caregiver with a total monthly stipend payment of \$633.36 would continue to receive this amount for 14 months and then transition to the new rate of \$632.49 on month 15. Assuming that the transition takes effect October 1, 2020, the total expense was found by determining the difference between the total monthly BLS rate and the total GS 4 Step 1 monthly rate and multiplying that by the number of months affected in the respective fiscal year; that is, twelve months in FY 2021 and two months in FY 2022. Table 5 shows the annual impact of this policy and Table 6 shows the annual number of Veterans affected.

As a result of transition to OPM's GS 4 Step 1, approximately 7,234 family caregivers would experience an increase in monthly stipend payments as a result of this proposed transition. For the family caregivers that will receive an increase, each would transition into the new GS 4/1 rate immediately. Assuming the transition takes effect October 1, 2020, the total expense was found by determining the difference between the total monthly BLS rate and the total GS 4/1 monthly rate and multiplying that by the number of months affected in the FY 2020; that is, twelve (12) months. Table 5 shows the annual impact of this policy and Table 6 shows the annual number of Veterans affected.

³ Please see Appendix B (BLS and GS Wage Systems) for a further detailed explanation of the relationship between the BLS and GS wage systems.

Table 5: Estimate of Stipends Benefit changes to Post-9/11 Veterans (Transfer)

Fiscal Year	BLS to GS Rate Change for all Post- 9/11 Population (Transfer)	Plus: Rate Freeze Impact (Transfer)	Less: Eligibility Criteria Impact (Transfer)	Net Transfer Impact from Post-9/11 Population (Transfer)
2021	\$16,465,807	\$19,702,121	\$0	\$36,167,928
2022	\$14,244,614	\$3,283,687	(\$51,051,125)	(\$33,522,824)
2023	\$13,843,883	\$0	(\$82,934,419)	(\$69,090,536)
2024	\$12,148,288	\$0	(\$84,593,107)	(\$72,444,819)
2025	\$10,324,243	\$0	(\$86,284,969)	(\$75,960,726)
5-Yr Total	\$67,026,834	\$22,985,808	(\$304,863,620)	(\$214,850,977)

Table 6: Veteran Sponsors Affected by the Rate Change and Eligibility Criteria

Fiscal Year	Stipend Rate Increased, Neutral, & New Participants	Stipend Rate Frozen	New Eligibility Criteria (No Ionger Eligible)	Total Post-9/11 Average Monthly Veteran Sponsors
2021	7,234	4,504	8,357	20,095
2022	11,374	751*	3,482**	15,606
2023	12,344	0	0	12,344
2024	12,501	0	0	12,501
2025	12,662	0	0	12,662

^{*}This is an annualized number. It is estimated that 4,504 Veterans will continue to receive the current stipend rate for two months and then decrease to the new stipend rate in month three.

Requested discharges

According to data provided by the Office of Community Care (OCC), approximately 1.5 percent of the total family caregiver population has requested a discharge for all other reasons except outlined in proposed § 71.45 (b)(3)(iii)(B) in the past 5 fiscal years Of the 1.5 percent of family caregivers that requested discharge, 58 percent are in tier 2 and 42 percent are in tier 3. The totals per tier were determined by utilizing an average tier payment for one month and then multiplying this total by the total caregivers in each tier. This logic was used to project the estimates for FY2021 – FY2025 in table 7 while assuming the number of family caregivers is constant.

Table 7: Expense of Caregivers Requested Discharges (excluding table 8) (Transfer)

^{**}This is an annualized number. It is estimated that 8,357 Veterans will continue to receive the current stipend rate for five months and will be discharged from the program on month six.

Fiscal Year	Unique Sponsor Counts	# Requests	Tier 2	Tier 3	Level 1 Stipend (30 day, all other) (Transfer)	Level 2 Stipend (30 day, all other) (Transfer)	FY Total Stipend (30 day, all other) (Transfer)
2021	43,328	650	377	273	\$8,399,132	\$9,800,939	\$18,200,072
2022	51,645	775	449	325	\$10,001,238	\$11,746,794	\$21,748,032
2023	63,981	960	557	403	\$12,597,070	\$14,809,200	\$27,406,270
2024	72,834	1,093	634	459	\$14,629,834	\$17,196,995	\$31,826,829
2025	74,888	1,123	652	472	\$11,111,201	\$18,035,054	\$29,146,255
5-Yr Total					\$45,627,274	\$53,553,929	\$128,327,458

According to OCC, approximately 0.06% of the total family caregiver population has reported domestic violence (DV) or intimate partner violence (IPV) as the reason for discharge in the past 5 fiscal years. Of the 0.06 percent of family caregivers that reported DV/IPV, 58 percent were in Level 1 and 42 percent in Level 2. The totals per tier were determined by utilizing an average tier payment multiplying this by 3 months (90 days) and then multiplying this total by the total caregivers in each tier. This logic was used to project the estimates for FY21 – FY25 in table 8 while assuming total family caregivers remain constant.

The separation of discharges is due to the length of benefit extensions in the proposed rulemaking. DV/IPV discharge requests will receive a 90-day extension of benefits and all other discharge requests will receive a 30-day extension of benefits.

Table 8: Expense of Caregivers Requested Discharges (DV/IPV) (Transfer)

Fiscal Year	Unique Sponsor Counts	# Requests	Tier 2	Tier 3	Level 1 Stipend (90 day, DV/IVP)	Level 2 Stipend (90 day, DV/IVP)	FY Total Stipend (90 day, DV/IVP)
2021	43,328	26	15	11	\$1,007,896	\$1,176,113	\$2,184,009
2022	51,645	31	18	13	\$1,200,149	\$1,409,615	\$2,609,764
2023	63,981	38	22	16	\$2,606,290	\$1,777,104	\$4,383,394
2024	72,834	44	25	18	\$1,755,580	\$2,063,639	\$3,819,220
2025	74,888	45	26	19	\$1,841,285	\$2,164,206	\$4,005,491
5-Yr Total					\$6,569,915	\$8,590,678	\$12,996,386

Other Healthcare Expenses4

Table 9 details the expected costs associated with other health benefits for pre 9/11 service era Veterans and table 10 details the cost reductions with other health benefits associated with new eligibility criteria. Projections provided by VA Enrollment and Forecasting utilized several data sources to include CHAMPVA beneficiary enrollment and FY 2018 Home Health Related Services User Prevalence. This data was then adjusted using a two-phase expansion in which the VA first expands PCAFC eligibility to those Veterans injured prior to May 1975 (the end of the Vietnam War) and post September 11, 2001. Two years later, the VA then will expand PCAFC to Veterans injured from all eras. A program ramp-up of 40%, 70%, and 90% for each phase of the PCAFC program expansion was also assumed. Thus, the first and second phase will reach full enrollment (i.e., 100%) in FY 2025 and FY 2027, respectively.

Table 9: Estimate of other Health Benefits for Caregivers of the expanded population (Transfer)

Fiscal Year	Sponsor Count	CHAMPVA	Mental Health	Respite Care	Total Other Health Benefits (Transfer)
2021	20,380	\$7,615,130	\$750,788	\$19,992,778	\$28,358,696
2022	33,822	\$12,993,019	\$1,347,171	\$34,765,643	\$49,105,833
2023	49,884	\$20,557,007	\$2,349,061	\$53,570,110	\$76,476,178
2024	58,559	\$25,633,975	\$3,077,267	\$66,044,067	\$94,755,308
2025	60,428	\$28,039,128	\$3,490,205	\$70,843,860	\$102,373,193
5-Yr Total		\$94,838,258	\$11,014,492	\$245,216,458	\$351,069,208

Table 10: Health Care Expense Reduction for Caregivers from the New Eligibility Criteria

Fiscal Year	Sponsor Count	Months Impacted	CHAMPVA	Mental Health	Respite Care	Total of Other Health Benefits (Transfer)
2021	9,544	0	\$0	\$0	\$0	\$0
2022	9,544	7	(\$3,138,321)	(\$419,116)	(\$4,010,352)	(\$7,567,789)
2023	9,544	12	(\$5,598,760)	(\$782,722)	(\$8,618,410)	(\$14,999,893)
2024	9,544	12	(\$5,853,887)	(\$849,834)	(\$9,252,310)	(\$15,956,030)

⁴ Please see Appendix A PCAFC BY19 PCAFC Projection Model for a further detailed explanation of the assumptions and methodology used to project the healthcare costs of eligible Veterans and service members.

202	9,544	12	(\$6,117,203)	(\$919,888)	(\$9,901,531)	(\$16,938,622)
5-Y Tota						

NOTE: The sponsor count was adjusted to factor 10.5 payments per year in order to determine the transfers costs. For further detail regarding this please see Appendix A, PCAFC BY19 PCAFC Projection Model

Financial planning and legal services

The Congressional Business Office (CBO) has estimated an annual average expense of \$130 per primary Family Caregiver who will receive financial planning and legal services. Using this estimate as the base assumption and adding a 2.3 percent inflation rate, it was applied to the number of total possible eligible Veterans based on projections provided by VA Enrollment and Forecasting. Table 11 shows the annual transfer expense of the financial planning and legal services.

Table 11: Total Expense of Financial Planning and Legal Services by Fiscal Year (Transfer)

Fiscal Year	Unique Sponsors	Annual Expense per Sponsor	Total Transfers
2021	43,328	\$133	\$5,762,665
2022	51,645	\$136	\$7,023,662
2023	63,981	\$139	\$8,893,313
2024	72,834	\$142	\$10,342,479
2025	74,888	\$145	\$10,858,739
5-Yr Total			\$42,880,859

Transportation for inspection

According to data provided by VA Manpower, 87% of facilities are deemed urban settings and 13% are deemed in rural settings. This ratio was used to estimate the number of unique sponsor counts in each setting with the assumption that each unique sponsor receives one reassessment per year. We estimated the hours per reassessment as 4 hours in urban settings and 8 hours in rural settings. This was divided by 2080 to get total vehicles needed. Utilizing GSA vehicle information data and average mileage provided by Office of Policy and Planning the cost per vehicle was determined. A 2.3% inflation rate was used for the out years. Table 12 and 13 show the expense of GSA vehicle leases.

Table 12: Total Expense of GSA Vehicle Leases for Urban Assessments (Transfer)

Fiscal Year	Unique Sponsor Count	Total Sponsors in Urban Setting	Total Urban Estimated Hours for Reassessment	Total GSA Vehicles for Urban Reassessments	GSA Monthly Rate	Mileage Rate	Avg Roundtrip Mileage for Urban Visits	Total Urban Mileage Costs	Total Urban Vehicle Rental Costs
2021	43,328	37,696	150,783	72	\$256.75	\$0.13	61	\$296,630	\$299,711
2022	51,645	44,931	179,723	86	\$264.20	\$0.13	61	\$361,694	\$364,864
2023	63,981	55,663	222,653	107	\$271.86	\$0.14	61	\$458,392	\$461,655
2024	72,834	63,366	235,464	113	\$279.74	\$0.14	61	\$533,830	\$537,187
2025	74,888	65,152	260,610	125	\$287.85	\$0.14	61	\$561,500	\$564,954
5-Yr Total								\$2,212,046	\$2,228,371

Table 13: Total Expense of GSA Vehicle Leases for Rural Assessments (Transfer)

Fiscal Year	Unique Sponsor Count	Total Sponsors in Rural Setting	Total Rural Estimated Hours for Reassessment	Total GSA Vehicles for Rural Reassessments	GSA Monthly Rate	Mileage Rate	Avg. Roundtrip Mileage for Rural Visits	Total Rural Mileage Costs	Total Rural Vehicle Rental Costs
2021	43,328	5,235	45,061	22	\$256.75	\$0.13	174	\$117,505	\$120,586
2022	51,645	6,714	53,710	26	\$262.66	\$0.13	174	\$155,073	\$158,225
2023	63,981	8,317	66,540	32	\$268.70	\$0.14	174	\$197,668	\$200,892
2024	72,834	9,468	75,748	36	\$274.88	\$0.14	174	\$231,549	\$234,848
2025	74,888	9,735	77,883	37	\$281.20	\$0.14	174	\$244,983	\$248,358
5-Yr Total								\$946,778	\$962,908

<u>Costs:</u> VA has determined costs of this rulemaking to total \$105.87 million in FY 2021 and \$642.45 million over the 5-year period ending in FY 2025. Itemized costs and assumptions are presented below.

Table 14: Total Costs

Fiscal Year	CARMA Total Costs	Total Printing Costs	Total FTE Costs	Total Overhead Costs	Total Costs
2021	\$20,570,266	\$10,547	\$74,499,845	\$36,000	\$95,116,658
2022	\$6,726,000	\$17,844	\$53,495,466	\$46,000	\$60,285,311
2023	\$7,398,000	\$26,901	\$100,709,245	\$58,000	\$108,192,146
2024	\$8,138,000	\$32,279	\$111,386,584	\$74,000	\$119,630,863
2025	\$8,952,000	\$34,048	\$91,129,237	\$94,000	\$100,209,285
5-Yr Total	\$51,784,266	\$121,620	\$431,220,377	\$308,000	\$483,434,263

CARMA IT Operating System

According to information provided by Office of Information and Technology (OI&T), additional funding will be needed for development, modernization, enhancement (DME) as well as operation and maintenance (O&M) post IT certification by the VA Secretary. This funding will support the software needs to address regulatory changes, expand reporting and monitoring needs, and also system sustainment. Table 15 details the operating costs of the CARMA IT system.

Table 15. Total Expense of CARMA IT System Operation, Maintenance, and Sustainment (Cost)

Fiscal Year	Operation and Maintenance (O&M)	Development, Modernization, Enhancement (DME)	Total Costs
2021	\$5,122,938	\$15,447,328	\$20,570,266
2022	\$6,726,000	\$0	\$6,726,000
2023	\$7,398,000	\$0	\$7,398,000
2024	\$8,138,000	\$0	\$8,138,000
2025	\$8,952,000	\$0	\$8,952,000
5-Yr Total	\$36,336,938	\$15,447,328	\$51,784,266

Annual Letters Printing

As a result of the expanded eligibility, additional printing costs are needed in order to provide an annual verification letter to the family caregiver. Table 16 below shows the costs associated with printing and mailing annual letters.

Table 16: Costs to Print Annual Letters for Expanded Population

Fiscal Year	Total Expanded Unique Sponsor Counts	Postage Rate	Postage Costs	Printing Consumables	Total Printing Costs
2021	20,380	\$0.49	\$9,986	\$561	\$10,547
2022	33,822	\$0.50	\$16,954	\$890	\$17,844
2023	49,884	\$0.51	\$25,581	\$1,321	\$26,901
2024	58,559	\$0.52	\$30,719	\$1,560	\$32,279
2025	60,428	\$0.54	\$32,429	\$1,619	\$34,048
5-Yr Total			\$115,669	\$5,950	\$121,620

Fulltime Equivalent Employees (FTE)

VA has determined costs resulting from FTEs to be \$74.49 million in FY 2021 and \$431.22 million over the 5-year period ending in FY 2025. Additional detail by type of FTE is found in Table 18 through Table 27.

Table 17: FTE Summary Impact Table

Fiscal Year	VA Medical Center FTE	Clinical Eligibility and Appeals Team FTE	occ	HEC	Caregiver Support Line	Total Salary
2021	\$23,941,436	\$44,395,390	\$1,080,412	\$2,298,824	\$2,783,783	\$74,499,845
2022	\$14,559,208	\$30,261,175	\$1,105,262	\$2,884,437	\$4,685,385	\$53,495,466
2023	\$45,813,966	\$43,550,099	\$1,437,147	\$2,930,587	\$6,977,446	\$100,709,245
2024	\$54,801,578	\$43,335,331	\$1,626,957	\$2,977,477	\$8,645,240	\$111,386,584
2025	\$43,362,739	\$33,942,528	\$1,664,377	\$3,025,117	\$9,134,476	\$91,129,237
5-Yr Total	\$182,478,927	\$195,484,523	\$6,914,156	\$14,116,442	\$32,226,329	\$431,220,377

VA Medical Center FTE⁵

Social Workers

A staffing model developed by VA Manpower and VHA Workforce Management determined that additional social work FTE will be needed to address expanded eligibility. Workload factors included applications, caregiver assessments, counseling to

⁵ Please see Appendix C Caregiver Staffing Model Assumptions for a further detailed explanation of the assumptions and methodology used to project the FTE costs.

family caregiver, and application package processing. Table 18 details the costs associated with additional social work FTE.

Table 18: Total Costs of Social Work FTE

Fiscal Year	Total SW FTE Needed	Total Salary Costs	Current SW FTE	Current Salary Costs	Additional SW FTE Needed	Additional SW Salary Costs Needed
FY 2021	775.90	\$92,607,859	691.00	\$82,206,403	84.90	\$10,401,456
FY 2022	739.20	\$88,222,386	691.00	\$84,097,150	48.20	\$4,125,236
FY 2023	938.50	\$112,018,035	691.00	\$86,031,385	247.50	\$25,986,650
FY 2024	1,009.80	\$120,520,602	691.00	\$88,010,107	318.80	\$32,510,495
FY 2025	958.70	\$114,423,548	691.00	\$90,034,339	267.70	\$24,389,209
5-Yr Total		\$527,792,430		\$430,379,384		\$97,413,046

Registered Nurses (RN)

This rulemaking includes mandatory reassessments, for continued eligibility for PCAFC on an annual basis, or another frequency based on a clinical determination and/or revocation for noncompliance in reassessments as well as wellness contacts to ensure the wellbeing of the family caregiver. According to a staffing model developed by VA Manpower and VHA Workforce Management, additional RN FTE will be needed to address the proposed rulemaking. Table 19 details the costs associated with the additional RN FTE.

Table 19. Total Costs of Registered Nurse FTE

Fiscal Year	Total RN FTE Needed	Total Salary Costs	Current RN FTE	Current Salary Costs	Additional RN FTE Needed	Additional RN Salary Costs Needed
FY 2021	313.50	\$39,205,800	243.00	\$31,337,755	70.50	\$7,868,045
FY 2022	293.40	\$36,690,106	243.00	\$32,058,523	50.40	\$4,631,583
FY 2023	373.40	\$46,687,341	243.00	\$32,795,869	130.40	\$13,891,472
FY 2024	399.70	\$49,768,888	243.00	\$33,550,174	156.70	\$16,218,714
FY 2025	376.60	\$47,083,325	243.00	\$34,321,828	133.60	\$12,761,497
5-Yr Total		\$219,435,460		\$164,064,151		\$55,371,309

Administrative Personnel (Admin)

A staffing model developed by VA Manpower and VHA Workforce Management determined that additional admin will be necessary to address the requirements within this rulemaking. Workload factors included number of applications and general administrative support. Table 20 details the costs of the additional admin FTE needed.

Table 20. Total Costs of Administrative Personnel FTE

Fiscal Year	Total Admin FTE Needed	Total Salary Costs	Current Admin FTE	Current Salary Costs	Additional Admin FTE Needed	Additional Admin Salary Costs
FY 2021	140.00	\$16,565,930	83.00	\$10,893,995	57.00	\$5,671,935
FY 2022	140.00	\$16,946,946	83.00	\$11,144,557	57.00	\$5,802,390
FY 2023	140.00	\$17,336,726	83.00	\$11,400,882	57.00	\$5,935,844
FY 2024	140.00	\$17,735,471	83.00	\$11,663,102	57.00	\$6,072,369
FY 2025	140.00	\$18,143,387	83.00	\$11,931,353	57.00	\$6,212,033
5-Yr Total		\$86,728,460		\$57,033,889		\$24,022,636

Central Eligibility and Appeals Team (CEAT)6

A staffing model developed by VA Manpower and VHA Workforce Management determined that additional clinical FTE will be necessary to address the requirements within this rulemaking. Workload factors included number of review cycles for a package and manpower availability factor (MAF) for nurses and doctors. Tables 21-25 detail the costs of the additional FTE needed for the CEAT.

Table 21: CEAT Medical Providers FTE Cost

Fiscal Year	Total Medical Provider FTE Needed	Total Salary Costs	Current Medical Provider FTE	Current Salary Costs	Additional Medical Provider FTE Needed	Additional Medical Provider Salary Costs Needed
FY 2021	43.80	\$15,950,170	14.00	\$4,984,491	29.80	\$10,965,679
FY 2022	34.40	\$12,540,448	14.00	\$5,099,134	20.40	\$7,441,314
FY 2023	44.80	\$16,336,149	14.00	\$5,216,414	30.80	\$11,119,735
FY 2024	45.40	\$16,554,352	14.00	\$5,336,392	31.40	\$11,217,960
FY 2025	39.10	\$14,246,701	14.00	\$5,459,129	25.10	\$8,787,572
5-Yr Total		\$75,627,820		\$26,095,561		\$49,532,259

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⁶ Please see Appendix C Caregiver Staffing Model Assumptions for a further detailed explanation of the assumptions and methodology used to project the FTE costs.

Table 22: SW/RN/LMHT FTE Cost

Fiscal Year	Total SW/RN/LMHT FTE Needed	Total Salary Costs	Current SW/RN/LMHT FTE	Current Salary Costs	Additional SW/RN/LMHT FTE Needed	Additional SW/RN/LMHT Salary Costs Needed
FY 2021	104.00	\$15,734,319	16.00	\$2,451,531	88.00	\$13,282,788
FY 2022	85.40	\$12,915,407	16.00	\$2,507,916.21	69.40	\$10,407,491
FY 2023	110.50	\$16,722,484	16.00	\$2,565,598.29	94.50	\$14,156,886
FY 2024	113.60	\$17,193,652	16.00	\$2,624,607.05	97.60	\$14,569,045
FY 2025	100.30	\$15,175,111	16.00	\$2,684,973.01	84.30	\$12,490,138
5-Yr Total		\$77,740,973		\$12,834,626		\$64,906,347

Table 23: Psychologist FTE Cost

Fiscal Year	Total PsyD FTE Needed	Total Salary Costs	Current PsyD FTE	Current Salary Costs	Additional PsyD FTE Needed	Additional PsyD Salary Costs
FY 2021	41.90	\$6,077,512	27.00	\$3,935,113	14.90	\$2,142,399
FY 2022	32.90	\$4,778,303	27.00	\$4,025,621	5.90	\$752,682
FY 2023	42.90	\$6,224,584	27.00	\$4,118,210	15.90	\$2,106,374
FY 2024	43.40	\$6,307,726	27.00	\$4,212,929	16.40	\$2,094,797
FY 2025	37.40	\$5,428,439	27.00	\$4,309,826	10.40	\$1,118,613
5-Yr Total		\$28,816,564		\$20,601,698		\$8,214,866

Table 24: OT/PT FTE Cost

Fiscal Year	Total OT/PT FTE Needed	Total Salary Costs	Current OT/PT FTE	Current Salary Costs	Additional OT/PT FTE Needed	Additional OT/PT Salary Costs Needed
FY 2021	41.90	\$5,194,819	17.00	\$2,111,342	24.90	\$3,083,477
FY 2022	32.90	\$4,084,306	17.00	\$2,159,903	15.90	\$1,924,403
FY 2023	42.90	\$5,320,531	17.00	\$2,209,581	25.90	\$3,110,950
FY 2024	43.40	\$5,391,597	17.00	\$2,260,401	26.40	\$3,131,196
FY 2025	37.40	\$4,640,017	17.00	\$2,312,390	20.40	\$2,327,627
5-Yr Total		\$24,631,270		\$11,053,617		\$13,577,653

Table 25: Miscellaneous Clinical FTE Cost

Fiscal Year	Total Miscellaneous Clinical Staff FTE Needed	Total Salary Costs	Current Miscellaneous Clinical Staff FTE	Current Salary Costs	Additional Miscellaneous Clinical Staff FTE Needed	Additional Miscellaneous Clinical Staff Salary Costs Needed
FY 2021	84.40	\$14,921,047	0.00	\$0	84.40	\$14,921,047
FY 2022	55.10	\$9,735,285	0.00	\$0	55.10	\$9,735,285

5-Yr Total		\$59,253,397		\$0		\$59,253,397
FY 2025	52.20	\$9,218,578	0.00	\$0	52.20	\$9,218,578
FY 2024	69.70	\$12,322,333	0.00	\$0	69.70	\$12,322,333
FY 2023	73.90	\$13,056,154	0.00	\$0	73.90	\$13,056,154

Office of Community Care (OCC)

The OCC Stipend Office is responsible for ensuring timely and accurate stipend payments as well as determining eligibility for CHAMPVA and processing medical claims. It currently has 30 FTE handling approximately 20,000 stipend payments and 1,800 medical claims on a monthly basis. It is expected that the stipend payments will almost double by the end of FY 2021 creating a need for additional FTE. The Stipend Office will need additional management of daily operations, quality assurance and audit teams, dedicated budget and training FTE. Additional FTE will also be needed for processing changes and errors related to stipend payments, verifying payments within the Treasury Financial Management System (FMS), and processing all medical claims. Table 26 details the costs of the additional FTE needed at the OCC Stipend Office.

Table 26. Costs of OCC FTE

Fiscal Year	Program Manager	Program Analysts	Budget Analyst	Supervisor	Lead Voucher Examiners	Voucher Examiners	Total FTE Needed	Total Salary Plus Benefits
2021	1	3	1	1	2	4	12	\$1,080,412
2022	1	3	1	1	2	4	12	\$1,105,262
2023	1	3	1	1	2	8	16	\$1,437,147
2024	1	3	1	1	2	10	18	\$1,626,957
2025	1	3	1	1	2	10	18	\$1,664,377
5-Yr Total								\$6,914,156

Health Eligibility Center (HEC)

In order to meet the standard of a 5-business day processing time, the Enrollment Eligibility Division will require additional FTEs. The additional FTE will be dedicated to complete application reviews and upload to CARMA. Table 27 details the costs of the additional FTE needed at the HEC Office.

Table 27. Total Costs of HEC FTE

Fiscal Year	Program Support Assistant FTE	Lead Program Support Specialist	Supervisory Program Specialist	Supervisor Management and Program Analyst	Total FTE Needed	Total Salary Costs
2021	39.00	3.00	3.00	1.00	46.00	\$2,298,824
2022	39.00	3.00	3.00	1.00	46.00	\$2,884,437

2023	39.00	3.00	3.00	1.00	46.00	\$2,930,587
2024	39.00	3.00	3.00	1.00	46.00	\$2,977,477
2025	39.00	3.00	3.00	1.00	46.00	\$3,025,117
5-Yr Total						\$14,116,442

Caregiver Support Line (CSL)

The average calls per caregiver enrolled in PCAFC is 2.79 per fiscal year as observed from FY2012 to date, with a 12% increase in daily calls over the time period FY 2017 to FY 2019. This average was multiplied by the expected enrollees each fiscal year to determine projected calls. The CSL currently has 39 licensed social worker responder FTE and each responder can triage an average of 2,363 calls per fiscal year while maintaining call center benchmarks. The total additional social work responder FTE needed were found by dividing the projected calls by average calls per responder and deducting the current social work responder FTE. The CSL will also implement chat and text services for callers. The Veterans Crisis Line (VCL) was consulted to determine the number of social work responder FTE needed to support chat and text services. The VCL uses a methodology ratio for every one-hundred (100) FTE sixty (60) provide phone service, six (6) text service, and six (6) chat service (60:6:6). The 60:6:6 ratio was used to determine the additional FTE needed for chat and texts services. A GS 11 Step 5 was used to calculate salary plus benefits (23 percent) to determine total costs with a 2.3 percent inflation in out years. Table 28 details the costs of the additional SW responders needed at the CSL.

Table 28. Costs of CSL Social Worker Responders

Fiscal Year	Unique Sponsor Counts	Average Calls per Unique Sponsor	Projected Call Volume	SW Responder FTE Needed	SW Text FTE Needed	SW Chat FTE Needed	Salary Plus Benefits per FTE	Total SW FTE	Total Salary Plus Benefits
2021	43,841	2.79	129,630	16	3	0	\$92,799	19	\$1,777,863
2022	52,436	2.79	155,043	27	4	4	\$94,933	34	\$3,266,917
2023	65,049	2.79	192,338	42	5	5	\$97,117	52	\$5,069,074
2024	73,793	2.79	218,192	53	6	6	\$99,350	64	\$6,391,894
2025	75,613	2.79	223,573	56	6	6	\$101,635	67	\$6,811,005
5-Yr Total									\$23,316,752

The CSL will need leadership, supervisory, technical, and administrative staff to support program operations. The VA call center standard responder to supervisor ratio of 15:1 was utilized to determine the total supervisory FTE needed. Additional FTE, workflow coordinators, will be needed to ensure call center operations are staffed adequately to

triage calls and manage daily operations. Table 29 details the costs of administrative support at the CSL.

Table 29. Costs of CSL Administrative Support

Fiscal Year	Director	Lead Supervisor	Shift Supervisory FTE	Workflow Coordinators FTE	Clinical Applications Coordinator	Program Support Asst	Total FTE	Total Salary Plus Benefits
2021	0	1	1	2	0	1	5	\$503,958
2022	0	1	2	2	1	2	8	\$781,998
2023	0	1	3	3	2	2	11	\$1,129,915
2024	1	1	4	3	2	2	13	\$1,442,319
2025	1	1	4	3	2	2	13	\$1,475,492
5-Yr Total								\$5,333,681

To ensure a high quality of care is provided to family caregivers and Veterans who call, a Quality Assurance and Clinical Training team will be needed. The role of this department is to conduct regular silent monitoring of calls (at least monthly), provide orientation for new employees, ongoing clinical supervision, education and trainings. In addition, this team will develop CSL Telephone Education Calls as they have been proven to be highly successful and well received by caregivers. Table 30 details the costs of the quality assurance and training program.

Table 30. Cost of CSL Quality Assurance

Fiscal Year	Quality and Training Lead	Salary Plus Benefits	Supervisor Clinical Training Education	Salary Plus Benefits	Total FTE	Total Salary Plus Benefits
2021	1	\$132,268	3	\$111,232	4	\$465,962
2022	1	\$135,310	4	\$113,790	5	\$590,469
2023	1	\$138,422	5	\$116,407	6	\$720,457
2024	1	\$141,606	5	\$119,084	6	\$737,028
2025	1	\$144,863	5	\$121,823	6	\$753,979
5-Yr Total						\$3,267,896

Additional overhead costs are needed in order to maintain the operations of the CSL. These costs include interpreter services, supplies, furniture and equipment. Overhead costs were determined by reviewing the current annual costs and increasing by 27% to account for new FTE. A 2.3% inflation rate was used in out years. Table 31 displays the costs.

Table 31. Overhead Costs

Fiscal Year	Administrative Overhead Costs
2021	\$36,000
2022	\$46,000
2023	\$58,000
2024	\$74,000
2025	\$94,000
5-Yr Total	\$308,000

Collection of overpayments

VA would collect overpayments as defined in § 71.15 of this section pursuant to the Federal Claims Collection Standards. Overpayment means a payment made by VA pursuant to this section to an individual in excess of the amount due, to which the individual was not eligible, or otherwise made in error. An overpayment is subject to collection action.

This Impact Analysis assumes recovery of overpayments to be cost neutral. The benefit portions costed in the other proposed rule sections were estimated at their expected value. If overpayments take place in implementing the expansion, then the higher than expected value would be offset by the recovery. The workload associated with this section is expected to be met with existing staff.

Alternative Policies:

VA considered two alternative policies in determining stipend rate calculation. The first alternative considered was to keep the current combined rates to determine the stipend amounts. This would cause some geographic regions to receive more than double the national median pay for a home health aide due to BLS rates and a policy decision by VA that does not allow for a decrease in stipend payments.

The second alternative considered was to use OPM GS Annual Rates that are commensurate with that which a healthcare entity would pay a home health aide specific to the geographic region. This would comply with the laws set forth in the MISSION Act of 2018, however, would not be practicable. VA must certify an IT system before the program can be expanded to pre-9/11 veterans and their caregivers. The differing OPM GS Annual Rates would introduce a higher error rate that could affect the stipend payments to family caregivers.

In the proposed rulemaking it was proposed to decrease the number of wellness contacts from every 90 days to biannual due to feedback that veterans and approved family caregivers felt the contacts were punitive and caused undue stress to the family. However, based on public comments there was significant concern that the needs of the older veteran population and their caregivers would not be met. It is well known that an aging population experience deteriorating health and will need assistance from others.

Therefore, we have revised the regulation to state that wellness contacts "will occur, in general, at a minimum of once every 120 days." By increasing the number of wellness contacts to a minimum of three, VA will ensure that the needs of the family caregiver are addressed in a timely manner.

Accounting Table:

			Five Yea		Real Dollars (tes are not ap		% & 7% Values ble)	5)		
Category					Tran	sfers (\$000)				
Year Dol	lars	FY2021 FY2022		FY2023	FY2024	FY2025	Preser	t Value	Annualized	
							3%	7%	3%	7%
	Low Est.	na	na	na	na	na	\$0	\$0	\$0	\$0
Federal Annualized Monetized	Pri. Est.	\$389,325	\$679,984	\$1,025,418	\$1,342,762	\$1,496,739	\$4,441,465	\$3,886,367	\$941,567	\$885,840
	High Est.	na	na	na	na	na	\$0	\$0	\$0	\$0
From/To: & Period Covered:	From:	Fed	deral Govern	ıment	То:	E	iligible Veterar	ns	Period Covered:	FY2021 - FY2025
Notes:	Transfe	rs represent	the stipend	amount, healt	h care, financi	al and legal se	ervices, and tra	ansportation.		
Category					Co	sts (\$000)				
Year Dol	lars	FY2021	FY2022	FY2023	FY2024	FY2025	Present Value		Annualized	
							3%	7%	3%	7%
	Low Est.	na	na	na	na	na	\$0	\$0	\$0	\$0
Federal Annualized Monetized	Pri. Est.	\$95,117	\$60,285	\$108,192	\$119,631	\$100,209	\$440,914	\$392,580	\$93,471	\$89,483
	High Est.	na	na	na	na	na	\$0	\$0	\$0	\$0
Notes:	Costs re	epresent exp	enses for IT	, printing, FTE	s, and overhe	ad.				L

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Date: July 30, 2020

Appendix A: Program of Comprehensive Assistance for Family Caregivers (PCAFC) BY19 PCAFC Projection Model

The Program of Comprehensive Assistance for Family Caregivers (PCAFC) for eligible Post-9/11 service era Veterans and the Program of General Caregiver Support Services (PGCSS) for eligible pre-9/11 service era Veterans are collectively referred to as VA's Caregiver Support Program. The PCAFC compensates the caregivers of Veterans who both separated from active duty after September 11, 2001 and meet the requirements for PCAFC. The BY19 PCAFC Projection Model includes both the projections of program enrollment and program expense for the following PCAFC benefits: monthly stipend payment, Civilian Health and Medical Program of the VA (CHAMPVA) benefits, mental health benefits, and respite care benefits.

In this report, the term "sponsor" refers to Veterans enrolled in the PCAFC and the term "caregiver" refers to the primary caregiver providing care for the sponsor.

Projection Summary

The VA Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act of 2018 enacts changes to the PCAFC program. The most significant changes reflected in these projections include the following:

- Veterans injured in the line of duty on or before May 7, 1975 will be eligible for the PCAFC two years after the required information technology information system is in place. These projections assume these Veterans (i.e. the Vietnam and pre-Vietnam service era Veterans) will begin enrolling on October 1, 2020. The actual start date depends on how quickly the program can be rolled out.
- The remaining Veterans injured between May 8, 1975 and September 10, 2001 (i.e. the Post-Vietnam service era Veterans) are assumed to begin enrolling on January 1, 2021 (Scenario BY19v2.1) or October 1, 2022 (Scenario BY19v2.2).
- There are several requirements for a Veteran to enroll in the PCAFC and have a
 caregiver, one of which is that the Veteran must have a service-connected
 serious injury. For these projections, "serious injury" is defined as having a
 minimum of a 70% service connected disability rating (SCD) and a daily need for
 personal care services.
 - These projections assume that current sponsors assigned a tier level 1 will not meet the daily need requirement, and that 2% of currently enrolled tier 2 and tier 3 sponsors will not meet the SCD requirement.
 - These projections assume that current sponsors no longer meeting the serious injury requirement will transition out of the PCAFC over a 17month period beginning October 1, 2020.
- Stipend payment rates are assumed to be set using the general schedule (GS)
 Federal employee pay schedule grade 4 (GS-4 step 1), beginning October 1,
 2020. This will result in an increase to the average stipend payment. The
 average per hour stipend payment rate is about \$14.76 in FY 2019. This is
 projected to increase to \$15.88 in FY 2020 (8% increase).

This shift in stipend rate to a GS-based payment rate would decrease the stipend rate for some current PCAFC enrollees due to the geographic variation in both the current stipend rates and the GS-based payment rates. For these sponsors that would experience a decreased payment rate, these projections assume there will be a 14-month transition period beginning October 1, 2020 where their current stipend rate will not be reduced.

At the time of this report development, VA is in the process of developing the details for the MISSION Act implementation. This report reflects assumptions consistent with VA's current expectations for program implementation.

It is our understanding the 100% reduction to tier 1 sponsors and 2% reduction to tier 2 and tier 3 sponsors is intended to reflect the revised eligibility requirements in the MISSION Act. The VA PCAFC workgroup assumes that tier 1 sponsors will not satisfy the revised program eligibility requirement that Veterans have a *daily* need for caregiver assistance. The workgroup also assumes that 2% of tier 2 and 3 Veterans will not meet the 70% minimum service connected disability requirement. VA noted that some tier 2 and tier 3 sponsors may also not meet the daily need requirement, but for these projection scenarios they assume that only tier 1 sponsors will not meet eligibility requirements. We rely on the VA workgroup for this and other assumptions and make no assessment on the reasonableness of this assumption.

There are several considerations that these projections do not account for. These include, but are not limited to the following:

- It is our understanding that VA expects publicity of the PCAFC to increase substantially compared to historical awareness of the program. Increases in public awareness may affect enrollment.
- Under VA's revised definition of "serious injury" for the purpose of evaluating
 Veteran eligibility for the PCAFC, a Veteran's need for caregiver assistance is no
 longer required to relate to their service connected disability rating. For example,
 a Veteran who has a 100% service connected disability rating and requires
 caregiver assistance, but whose need for caregiver assistance is caused by a
 non-service connected injury may be eligible for the PCAFC under the revised
 eligibility interpretation, but may not have been eligible under historical PCAFC
 eligibility interpretation. It is possible that this will expand enrollment relative to
 current requirements.
- The shelter-at-home orders regarding the novel coronavirus COVID-19 may have an unknown impact on PCAFC enrollment. It is possible that an increased number of family members have started providing more caregiver duties during the shelter-at-home orders, which may incite an increase to PCAFC applications and/or enrollment. Any economic impacts caused by COVID-19 such as increased unemployment may also incite more Veterans to apply for the PCAFC as a source of income. The extent of these impacts are not currently known and are not included in these projections.

The projection results are provided in Exhibits 1a through 3g. These results include projections for Veteran sponsor counts, caregiver counts, stipend payment counts and expense, CHAMPVA benefit expense, mental health benefit expense, and respite care benefit expense by fiscal year for each of the four eras of Veteran service. Note, there are other funding needs for the Caregiver Support Program such as for caregiver travel and other overhead expenses which are outside the scope of these projections. The four eras of Veteran service are listed as follows:

- Post-9/11: served in active duty after September 11, 2001,
- Post-Vietnam: served in active duty after the Vietnam War (May 7, 1975), but before September 11, 2001,
- Vietnam: served in active duty during the Vietnam War, and
- Pre-Vietnam: served in active duty prior to the Vietnam War.

For purpose of determining PCAFC eligibility, service era is defined based on when a serious injury was sustained in the line duty. However, the VetPop defines a Veteran's service era based on self-reported survey results of when Veterans indicated they served. It is our understanding that the VetPop does not include projections split by injury date, so we use this alternate service era definition as a proxy for the service era used for determining PCAFC eligibility.

Projection Uncertainty Considerations

There is significant uncertainty in the multi-year projections and service era expansion projections included in this report. The scenarios presented are not intended to represent minimum or maximum program enrollment or costs. The results of the scenarios will only be realized in the event the assumptions underlying the scenarios are realized. Actual results may significantly differ from the projections shown in this report. We are unable to determine the reasonableness of some of the assumptions underlying these projections because of the significant unknowns regarding the PCAFC expansion. Significant unknown items include the following:

- <u>Daily need for assistance</u>: The MISSION Act requires that a sponsor "need regular or extensive instruction or supervision without which the ability of the veteran to function in daily life would be seriously impaired⁷". These projections assume that Veterans eligible for PCAFC enrollment have a SCD of 70% or higher and a daily need for assistance. We relied on the VA workgroup's assumption that the clarification of this eligibility requirement will reduce the current sponsor population.
- <u>Publicity</u>: We note that VA expects the publicity of the PCAFC to increase substantially compared to historical awareness of the program. This may increase application and/or enrollment volume by an unknown amount.

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⁷ MISSION Act page 116.

- <u>Injury versus illness</u>: A Veteran's need for caregiver assistance is no longer required to relate to their reason for a service connected disability rating. It is possible that this will expand enrollment relative to current requirements.
- Future enrollment patterns versus new separations: Between FY 2016 and FY 2019, enrollment in the PCAFC has declined. At the same time, the number of Veterans who have separated from active duty since September 11, 2001 has been increasing. In addition to this increase in Veterans, an increasingly larger percentage of VHA enrollees have been assigned Priority Level 1a (70% or higher SCD). This implies the rate of enrollment has decreased. These projections relate sponsor enrollment to the pool of eligible Veterans. The primary drivers of these recent enrollment patterns are not fully understood, so it is unknown how future increases to the Veteran pool will relate to future PCAFC enrollment. These projections assume growth in the Veteran pool does not result in corresponding growth in PCAFC enrollment.
- PCAFC Enrollment by Age: Current PCAFC enrollment data contains few older Veterans because the program is currently limited to Post-9/11 Veterans only. It is unknown how prevalence of the need for caregiver assistance compares between older Veterans and younger Veterans. Current PCAFC sponsors are mostly younger Veterans, so the model includes an assumption for how the need for caregiver assistance will increase with age. The model assumes that PCAFC enrollment will increase with age at a rate similar to that of home health related services experienced by Priority 1a VHA enrollees in FY 2019.
- Application Adjudication: The model reflects the PCAFC workgroup intention to process applications based only on a Veteran's SCD and the Veteran's daily need for assistance. In other words, elderly Veterans with a 70% or greater SCD and a daily need for assistance will be eligible, assuming they have an eligible caregiver as well and meet other program requirements. Any changes to VA's adjudication of PCAFC applications or interpretation of eligibility criteria may materially impact PCAFC enrollment for Veterans from all service eras. It is also unknown what the historical PCAFC enrollment would have looked like under the revised eligibility requirement. We rely on VA's assumption that under the revised requirements, historical tier 1 sponsors would not have been eligible, 2% of tier 2 and tier 3 sponsors would not have been eligible, and there would not have been any Veterans eligible who were not also historically eligible under the current program.

The projections assume 0% of current tier 1 sponsors and 98% of current tier 2 and tier 3 sponsors meet the clearer interpretation of the "daily need for assistance" requirement. Actual enrollment may vary from these projections depending on how the PCAFC adjudicates applications against this requirement.

MISSION Act and program expansion: The PCAFC is currently open to Veterans
who were injured in the line of duty on or after September 11, 2001 (i.e. Post9/11 service era Veterans). The MISSION Act expands the PCAFC to all service

eras. There are many considerations of unknown materiality for projecting program enrollment of older Veterans using existing program experience (which is primarily the experience of younger Veterans). Some of these considerations include the following:

- Older Veterans utilize nursing home benefits more readily than younger Veterans. Veterans may qualify for a caregiver, but this need may be met in an institutional setting including VA community living centers (CLC), state veteran homes (SVH), or community nursing homes (CNH). These projections do not reduce the count of Veterans by those who use or may use such institutional care.
- Older Veterans may rely more on spouses and children to provide Caregiver services than younger Veterans, and the extent to which spouses and children are willing and able to provide these services may vary by age.
- The severity of sponsor tier level need may vary by age resulting in significant changes in the distribution of PCAFC tier levels.
- Older Veterans may rely more or less on VA for daily assistance than younger Veterans, instead of assistance through the PCAFC.
- The change in the stipend payment rates (OEF Home Health Aide Pay Rate from Bureau of Labor and Statistics to GS-4 step 1) varies geographically. Areas with large stipend payment increases may incentivize more Veterans to apply for the PCAFC.
- Ramp up: The actual ramp-up of expansion era PCAFC sponsors may be faster or slower than what is assumed in these projections. It is unclear how quickly VA will process these applications and what the application approval rates will be at the start of the program. There may be pent-up demand contributing to ramp-up as well, which may differ for the expansion era Veterans compared to historical Post-9/11 Veterans.
- <u>COVID-19</u>: No adjustments have been made to either the enrollment projections or PCAFC benefit costs due to potential impacts of the novel coronavirus COVID-19. The shelter-at-home orders regarding COVID-19 may have an unknown impact on PCAFC enrollment. It is possible that an increased number of family members have started providing more caregiver duties during the shelter-at-home orders, which may incite an increase to PCAFC applications and/or enrollment. Any economic impacts caused by COVID-19 such as increased unemployment may also incite more Veterans to apply for the PCAFC as a source of income. The extent of these impacts are not currently known and are not included in these projections.

Exhibits

Projection Results by Scenario

- Summary: Scenario Details and Overall Results
- 1a: Sponsors and Stipend Expense

1b: Enrollment Rates

Scenario BY19v2.1 Projection Exhibits:

- 2a: Sponsors and Stipend Expense
- 2b: Stipend, CHAMPVA, Mental Health, and Respite Care Expenses
- 2c: Historical and Projected Sponsors by age band and service era
- 2d: Stipend Expense Development by Tier
- 2e: CHAMPVA Eligibility and Expense
- 2f: Mental Health and Respite Care Expense
- 2g: Sponsor enrollment versus Veteran Population

Scenario BY19v2.2 Projection Exhibits:

- 3a: Sponsors and Stipend Expense
- 3b: Stipend, CHAMPVA, Mental Health, and Respite Care Expenses
- 3c: Historical and Projected Sponsors by age band and service era
- 3d: Stipend Expense Development by Tier
- 3e: CHAMPVA Eligibility and Expense
- 3f: Mental Health and Respite Care Expense
- 3g: Sponsor enrollment versus Veteran Population

Scenarios BY19v2.1 and BY19v2.2 are described as follows:

Scenario BY19v2.1 Description:

The enrollment rate development for Post-9/11 service era Veterans is based on FY 2019 experience, while the pre-9/11 service era Veterans use FY 2016 through FY 2019 experience. The enrollment rate for the pre-9/11 service era Veterans reflects the impact of the MISSION Act as soon as enrollment begins (October 1, 2020 for Vietnam and Pre-Vietnam service eras and January 1, 2021 (Scenario BY19v2.1) or October 1, 2022 (Scenario BY19v2.2) for Post-Vietnam service era Veterans). For Post-9/11 service era Veterans, the changes to eligibility requirements due to the MISSION Act are delayed for a 17-month transition period starting October 1, 2020. In other words, there is no reduction to Post-9/11 enrollment until March 1, 2022, at which time 100% of tier 1 and 2% of tier 2 and 3 sponsors are expected to be dis-enrolled.

The dis-enrollment of Post-9/11 sponsors reflects the revised PCAFC eligibility requirements under the MISSION Act where the sponsor must have an SCD rating of 70% or greater and must have a daily need for caregiver assistance. The revised requirements no longer require that the need for caregiver assistance be the result of the service-connected injury or condition(s). The dis-enrollment percentages reflect VA's assumption of the net impact of all eligibility requirement revisions. Note that pre-9/11 service eras must meet these enrollment requirements from the date of program expansion.

In this scenario, the probability of a Veteran enrolling in the PCAFC for Post-9/11 service era Veterans is assumed to decrease at the same rate the Post-9/11 service era

Veteran pool increases. This effectively counteracts the increase in the Veteran pool for Post-9/11 service era Veterans such that PCAFC enrollment is not impacted by growth in the underlying Veteran pool for Post-9/11 service era Veterans. The Post-9/11 sponsor population is still projected to grow slightly over the course of the projection due to the aging of the Post-9/11 service era Veteran population because PCAFC enrollment probabilities are assumed to increase with age.

The logic behind this assumption for the Post-9/11 service era Veterans is that PCAFC enrollment has decreased from FY 2016 to FY 2019, yet the Post-9/11 service era Veteran pool has increased during this time. This implies that recent separations from active duty are not resulting in corresponding increases in PCAFC enrollment, so future separations may also have a similar effect.

Scenario BY19v2.2 Description:

Scenario BY19v2.2 uses similar assumptions as Scenario BY19v2.1 with the exception of the assumed expansion start date for the Post-Vietnam service era Veterans. Scenario BY19v2.1 assumes these Post-Vietnam service era Veterans will begin enrolling in the PCAFC on January 1, 2021. Scenario BY19v2.2 assumes enrollment begins October 1, 2022, two years after the expansion for the Vietnam and pre-Vietnam service eras. All other assumptions are the same between these two scenarios.

Program Background

<u>Stipends</u>

Monthly stipend payments are provided to the caregiver starting with the month of their application to the PCAFC. The stipend payment falls under one of three tiers, depending on the percentage of full time work of a home health aide provided by the caregiver.

- Tier 1 25%
- Tier 2 62.5%
- Tier 3 100%

PCAFC Veteran Eligibility Requirements

Eligibility determinations are made by an assigned VA Medical Center clinical team. Veterans⁸ and caregivers are eligible under the current PCAFC program if they meet the following requirements (including the MISSION Act of 2018 expansion)⁹:

⁸ Veterans plus members of Armed Forces undergoing medical discharge.

⁹ Provided by VA on June 17, 2019 in a file titled, "PCAFC Veteran Eligibility Training for CSCs FINAL 2019 5.15.19.ppt"

Veteran Eligibility¹⁰:

- ➤ The Veteran has a 70% or greater combined service connected disability rating associated with an injury:
 - o Post-9/11: on or after September 11, 2001,
 - Pre-Vietnam and Vietnam: on or before May 7, 1975 with enrollment expected to begin June 1, 2020, or
 - Post-Vietnam: between May 7, 1975 and September 11, 2001 with enrollment expected to begin January 1, 2021 (Scenario BY19v2.1) or October 1, 2022 (Scenario BY19v2.2).
- ➤ The Veteran requires another person (a caregiver) to assist the Veteran with the management of personal care functions required in everyday living.
- ➤ The Veteran in need of personal care services for a minimum of six continuous months based on any one of the following clinical criteria:
 - o An inability to perform one or more activities of daily living
 - A need for supervision or protection based on symptoms or residuals of neurological or other impairment or injury.
 - The individual is a Veteran who has been rated 100 percent disabled, and has been awarded special monthly compensation that includes an aid and attendance allowance.
- ➤ It is in the best interest of the Veteran to participate in the Caregiver Support Program.
- ➤ The Veteran will receive ongoing care from a Patient Aligned Care Team (PACT) or other VA health care team as a requirement for participation in the program.
- The Veteran agrees to receive ongoing care at home after VA designates a Family Caregiver.
- Personal care services that would be provided by the caregiver will not simultaneously be provided through another individual or entity.

Caregiver Eligibility:

- 1. The caregiver must be at least 18 years of age.
- 2. The caregiver must be either:
 - a. The Veteran's spouse, son, daughter, parent, step-family member, or extended family member, or
 - b. Someone who lives with the Veteran full time.
- 3. Prior to approval, the caregiver will be provided with training and must be able to demonstrate the ability to assist the Veteran with personal care functions in everyday living.

The MISSION Act expands the PCAFC to Veterans of all service eras, and mandates a timeline in order to begin enrolling these Veterans.

The MISSION Act also revised the second requirement to include the clause relating to "everyday living." The actual eligibility requirement in the MISSION Act reads, "a need

¹⁰ Provided by VA in an email on July 26, 2019.

for regular or extensive instruction or supervision without which the ability of the Veteran to function in daily life would be seriously impaired."

Note that the MISSION Act leaves the implementation up to VA and the PCAFC program. It is our understanding that the PCAFC program will require a 70% or greater service connected disability rating, as well as the need for daily assistance.

PCAFC expects that current tier 2 or tier 3 sponsors will meet the need for daily assistance requirement, but that current tier 1 sponsors will not meet this threshold. Tier 1 sponsors receive assistance equivalent to 25% of the work of a full time caregiver, so the assumption is that many of these sponsors may not require daily assistance thereby not meeting this revised eligibility requirement. Additionally, 2% of current tier 2 and tier 3 sponsors are not expected to meet the 70% or greater service connected disability rating. In the event a current sponsor no longer meets the enrollment requirements, there is expected to be a 17-month transition period before they are disenrolled from the PCAFC.

Projection Results

Exhibits 1a and 1b show the resulting projections of unique sponsors (Veterans enrolled in the program with a caregiver), unique caregivers, and the associated stipend expenses by service era separately for scenarios BY19v2.1 and BY19v2.2. Exhibit 1a displays unique sponsor counts, unique caregiver counts, and total stipend dollars. Exhibit 1b displays the sponsor enrollment rate relative to the Veteran pool by year and service era. The Summary tab details the assumptions included in each scenario and includes total sponsor projections and benefit costs by year.

Stipend projections are calibrated to the FY 2019 total stipend expense of \$347 million.

The only difference between the two scenarios is the start date for the Post-Vietnam service era Veterans. Each scenario assumes a ramp-up period of four years before full enrollment levels are achieved. Each scenario reaches a maximum annual benefit cost of approximately \$2.1 billion. Benefits in this regard include stipend payments, CHAMPVA expense, mental health benefit expense, and respite care benefit expense.

Exhibits 2a and 3a contain summaries of unique sponsor counts, unique caregiver counts, and stipend expenses by service era and year. Exhibit 2a corresponds to Scenario BY19v2.1 and Exhibit 3a corresponds to Scenario BY19v2.2, as do all other similarly numbered exhibits.

Exhibits 2b and 3b display projected expenses for stipend payments, CHAMPVA, mental health, and respite care by service era. Additional CHAMPVA expense projection detail is included in Exhibits 2e and 3e. Additional mental health and respite care expense projection detail is included in Exhibits 2f and 3f. Of the four benefits modeled, in FY 2019 the distribution of expenses was as follows:

• Stipend – 93.8%

- CHAMPVA 3.1%
- Mental health 0.3%
- Respite care 2.8%

By FY 2030 and across all service eras, these relationships are all projected to remain similar.

Exhibits 2c and 3c display projected sponsor counts by service era and age band. These exhibits illustrate the extent to which each service era is projected to age over the projection period.

Exhibits 2d and 3d display the development of projected stipend expenses. Sponsor counts, annual stipend payments per sponsor, cost per stipend payment, and total stipend expense is displayed by tier level, service era cohort, and projection year.

Exhibits 2g and 3g show the projected enrollment in PCAFC by service era relative to the total Veteran population that has a 70% or greater service connected disability rating.

Methodology & Assumptions

Experience Basis – PCAFC Enrollment Data

We project PCAFC sponsor enrollment by applying assumed PCAFC enrollment probabilities to projected Veteran counts. These enrollment probabilities are developed using historical PCAFC enrollment experience by age band, gender, and service-connected disability level compared to the estimated pool of Post-9/11 Veterans potentially eligible for enrollment. The enrollment probabilities used in the projection vary only by age band and gender. Service-connected disability level is used to develop the assumption for how enrollment probabilities increase with age. The final enrollment probabilities used in the projections only vary by age band and gender so that changes in the mix of service-connected disability levels in the Veteran pool do not impact PCAFC enrollment.

PCAFC sponsor enrollment has been declining since FY 2016 despite a growing number of Veterans who have separated since September 11, 2001. The decrease in sponsors may be the result of steadily declining PCAFC application approval rates along with more frequent benefit revocations for sponsors no longer meeting the PCAFC eligibility requirements. There has not yet been stability in the sponsor enrollment rate.

For Post-9/11 service era Veterans, we used FY 2019 PCAFC enrollment experience to develop the enrollment probabilities because FY92018 is the most recent data available and believed to be the most indicative of current PCAFC enrollment patterns.

For the pre-9/11 service eras, we used a combination of FY 2016 through FY 2019 PCAFC enrollment experience to develop the enrollment probabilities. We used these

four years of PCAFC enrollment in order to increase the credibility of the data compared to if only one or two years were used. Also, using FY 2016 through FY 2019 PCAFC enrollment provides a more conservative projection because the enrollment rate has been decreasing since FY 2016.

<u>Experience Basis – Eligible Veteran Pool</u>

The historical pool of eligible Veterans for each fiscal year was estimated using the VetPop2016, the BY18 VetPop Proxy, and the Veterans Service Network Compensation and Pension (VETSNET C&P) database. VetPop2016 does not contain projections by level of service-connected disability, so the BY18 VetPop Proxy and VETSNET C&P databases were used to develop allocations of the VetPop2016 projections by level of service-connected disability.

Predictive Analytics and Actuary (PAA) provided VetPop2016 projections by service era and 5-year age band for fiscal years 2017 through 2046 (beginning of year). Veteran populations for previous years were estimated by back casting the FY 2017 VetPop2016 counts.

Exhibit 1b shows the total pool of eligible Veterans in each fiscal year along with the enrollment probability by year, service era cohort, and scenario.

Enrollment Probability Development

Using the actual PCAFC sponsor enrollment experience and the estimated eligible Veteran pool at the start of each fiscal year, raw enrollment probabilities were calculated by age band and gender. For each age and gender combination, if there were at least 500 PCAFC sponsors in the experience period¹¹, the final enrollment probability is based entirely on the raw probability. For age and gender combinations with fewer than 500 sponsors, the final probability is a combination of the raw probability and a manual probability rate. The current data is sparse for older Veterans so the enrollment probabilities for these groups tend to have less credibility.

The manual probabilities were developed by calculating historical enrollment probabilities from the experience by age band and service-connected disability rating. Any combination of age band and service-connected disability rating with a unique sponsor count exceeding 500 is assumed to be credible. Enrollment probabilities are assumed to increase with age at the same rate as FY 2018 home health user prevalence increased with age for Priority Level 1a VHA enrollees. This was accomplished as follows:

- First, enrollment rates were calculated for PCAFC sponsors with an SCD of 100% for age bands where there is at least 500 unique sponsors.

¹¹ For Post-9/11 service era Veterans, we used FY 2019 as the experience period to develop enrollment probabilities. For pre-9/11 service era Veterans, we used FY 2016 through FY 2019 to develop enrollment probabilities.

- Then, the average enrollment rate for these credible age bands was calculated. In FY 2019, this average enrollment rate was 8.5% constituting ages 25 through 59.
- The average home health usage rate for Priority 1a VHA enrollees was also calculated for these same age bands. This was 2.3%.
- Then, for the age bands considered not fully credible, the difference between the home health usage rate and the average home health usage rate was added to the average PCAFC enrollment rate for those age bands.
- For example, 11.7% of 80-84 year old Priority 1a VHA enrollees used home health to some extent in FY 2018. As stated above, the average home health usage for ages 25-59 was 2.3%. This means that 9.4% more 80-84 year old Priority 1a VHA enrollees used home health than 25-59 year old Priority 1a VHA enrollees did on average. This 9.4% is added to the average PCAFC enrollment rate for 25-59 year olds (which was 8.5%) yielding an assumed PCAFC enrollment rate of 17.9% for 80-84 year olds who are 100% SCD.

Home health services were selected for developing the assumed sponsor enrollment probabilities by age band because the need and usage of home health services is assumed to be comparable to the need and usage of the services a caregiver provides. As described above, the PCAFC enrollment probability was first calculated using PCAFC enrollment for sponsors with an SCD of 100%. Enrollment probabilities for sponsors with SCD of less than 100% were then calculated by applying the ratio of average historical enrollment rates for lower SCD levels to the average enrollment rate for 100% SCD. After the enrollment probabilities are estimated for all ages and SCD levels, the enrollment probabilities are rolled up to the age band level using historical Veteran pool estimates.

Growth in the count of Veterans with a service-connected disability are not assumed to be a strong indication for PCAFC enrollment. In recent years, the frequency of VHA enrollee transitions into Priority 1a has been increasing. However, these transitions into Priority 1a has not led to an increase in PCAFC enrollment. Therefore, future continued transitions into Priority 1a are assumed to be largely independent of increases in PCAFC enrollment. In order to account for this in the PCAFC enrollment projections, enrollment probabilities are not assumed to vary by service-connected disability level.

Projected Eligible Veteran Pool

Projected enrollment probabilities by age band and gender are applied to projected Veteran counts split by service era, age band and gender. PAA provided projected Veteran counts through FY 2045 split by service era and age band. Exhibit 1b contains the Veteran pool counts by fiscal year and service era. Note that the total Veteran population is increasing for Post-9/11 service era Veterans due to new separations, while all other service eras are decreasing since any new Veteran is assigned to the Post-9/11 service era.

These projected Veteran counts for each service era are then allocated to service connected disability level and gender using a combination of the BY18 VetPop Proxy and VETSNET.

Projected Veteran Sponsor Development

The estimated number of Veterans that would become a caregiver sponsor is initially calculated by multiplying the estimated Veteran pool counts by the enrollment probabilities. Several adjustment factors are then applied to the resulting sponsor counts, described as follows:

Ramp-Up

For the pre-9/11 service eras, a dampening factor is applied to account for assumed enrollment ramp-up during the first few years of program eligibility. Specifically, for all pre-9/11 service eras, the enrollment probabilities are dampened using factors of 40%, 70%, 90%, and 100% for the first four years (48 months) after enrollment begins. The ramp-up is applied by the number of months since the start of enrollment because some program expansions are assumed to begin mid-year. For example, the count of Vietnam service era sponsors is assumed to be 40% of a fully matured population for October 1, 2020 through September 31, 2021. For the subsequent 12 months, the adjustment is 70% of a fully matured population, and so forth.

The number of stipend payments per sponsor is also assumed to increase over the first few years of enrollment. We presume this to be primarily caused by sponsors not enrolling and disenrolling uniformly throughout the fiscal year for the first few years of the expansion, so on average sponsors receive fewer than 12 stipend payments per year. For example, if there was no disenrollment during a year, and sponsors enrolled throughout the year uniformly, we would expect unique sponsors to receive an average of six stipends that year. As enrollment grows and stabilizes, we assume the average number of stipend payments per sponsor to stabilize as well.

Scenario BY19v2.1

In projection scenario BY19v2.1, the MISSION Act changes are assumed to begin October 1, 2020. These changes include expanding the PCAFC to pre-Vietnam and Vietnam Veterans, changing the basis of stipend payments to the GS level 4 step 1 wage schedule, and enacting new eligibility requirements where sponsors must have a 70% or higher service connected disability rating as well as a daily need for caregiver assistance.

Pre-Vietnam and Vietnam service era Veterans are assumed to be eligible to enroll starting on October 1, 2020, while Post-Vietnam Veterans are assumed to be eligible to starting on January 1, 2021.

Due to the eligibility requirement changes, current tier 1 sponsors are expected to transition out of the PCAFC due to the expectation that they will not meet the requirement of daily need for caregiver assistance. Also, 2% of current tier 2 and tier 3 sponsors are expected to transition out of the PCAFC due to not meeting the 70% or higher service connected disability level requirement. Current PCAFC sponsors will have a 17-month transition period to meet the revised eligibility requirements, after which they will be disenrolled if they are unable to meet eligibility requirements. Newly enrolling sponsors from all service eras are assumed to be assigned to tier 2 and tier 3 only.

The PCAFC stipend rates are projected to shift to the GS level 4 step 1 (GS-4-1) wage schedule, away from the current payment schedule based on Bureau of Labor and Statistics OEF Home Health Aide Pay Rate (OEF rate). Current PCAFC caregivers will have a 14-month transition period during which time they will receive the greater of the OEF rate or the GS-4-1 rate. The stipend payment rate transition is expected to incur an additional \$23.0 million in stipend expense (\$19.7 million in FY 2021, and \$3.3 million in FY 2022).

Scenario BY19v2.2

In projection scenario BY19v2.2, the projection assumptions are the same as in scenario BY19v2.1, with the exception of the enrollment start date for the Post-Vietnam service era Veterans, which is assumed to be October 1, 2022 instead of January 1, 2021.

<u>Tier Level Distribution</u>

The PCAFC sponsor projections are allocated into the three stipend tier levels using the distribution of tier level by age band in FY 2019. FY 2019 experience was not deemed fully credible for sponsors under the age of 25 or over the age of 55, so the distribution of tier levels was extrapolated for those ages using the experience of the fully credible ages. In general, it is assumed that older sponsors are more likely to be assigned to tier level 3 than tier level 1, with tier level 2 remaining largely unchanged by age band.

Beginning with the MISSION Act enrollment requirements, the projections assume new sponsors are assigned to tiers 2 and 3 only. Current tier 1 sponsors are expected to transition out of the PCAFC over a 17-month period after expansion enrollment begins.

For the expansion service eras, we project that the distribution of tier 2 and tier 3 sponsors will change over the first few years of the expansion. In particular, we project that in the first few years of the expansion era enrollment (e.g. FY 2021 and FY 2022), there will be a higher proportion of tier 3 sponsors than tier 2, and that this proportion will decrease over time. The magnitude of these tier distribution changes is based on observed experience from the historical PCAFC enrollment experience.

Projected Stipend Development

Projected unique sponsor counts are multiplied by the projected number of stipend payments per unique sponsor per year. For the pre-9/11 service eras, the projected number of stipend payments per unique sponsor per year is assumed to ramp-up over time until a steady-state is reached. This is because for the first several years of enrollment for the pre-9/11 service eras, it is assumed that new sponsors entering the program will enter at a rate faster than sponsors will leave the program so that the average length of active enrollment during the fiscal year will be lower than a fully stabilized program. Actual PCAFC stipend payment and enrollment experience was used to develop the assumed number of stipend payments per unique sponsor per year, which increases from 6 in the first year of enrollment to 10.5 once the steady state enrollment level has been achieved. Exhibits 2d and 3d show the average stipend payments by service era.

Once the number of stipend payments has been projected, the projected cost per stipend per tier level is applied. This cost assumption is developed using the general schedule grade 4, step 1 (GS-4-1) cost structure. The GS-4 step 1 fee schedule will increase each fiscal year consistent with BY18 EHCPM budget scenario BBA8 wage increase assumptions, specifically:

CY 2021: 1.5%CY 2022+: 2.0%

There will be a 14-month transition period starting October 1, 2020 for current sponsors who would receive a decrease in stipend payment rate by switching to the GS-4-1 pay rate. During this 14-month period, no stipend payments will be reduced so these sponsors will continue to receive stipend payments at a consistent level as they have historically. After the 14-month period, all sponsors will receive the GS-4-1 payment rates. This 14-month transition period is expected to result in \$23.0 million more in stipend payments relative to the GS-4-1 rate.

The GS-4-1 cost structure provides an hourly rate of reimbursement. Because tier levels are associated with a percentage of full time work compared to a home health aide (25% = tier 1, 62.5% = tier 2, 100% = tier 3), the model develops average costs per tier level per month. Use of the GS-4-1 cost structure is expected to go into effect October 1, 2020. For FY 2020, the FY 2019 average stipend payment rate is used and is trended to FY 2020 assuming a 2.4% CPI-U trend¹².

The GS-4-1 payment rate varies by GS locality, and sponsor distributions by age also vary by GS locality. This means that the average national stipend payment rate differs by sponsor age band due to differences in geographic mix of different sponsor age bands. For each age band and fiscal year, we calculated an average stipend payment rate assuming a geographic mix consistent with a recently observed geographic mix of

¹² CPI-U Annual Growth Rate for 2020 is from the "SOA Long Term Healthcare Cost Trends Model v2019b" developed by Professor Thomas Getzen from Temple University"

VHA enrollees by age band. The average stipend rates by year and age band were then rolled into average stipend rates by service era and fiscal year.

Using the above process, an initial projected cost by fiscal year, service era, age band, and tier level is developed. The FY 2019 total projected stipend expense is then calibrated to the actual FY 2019 stipend expense of \$347.1 million. The adjustments required to calibrate to the FY 2019 experience were applied to all projection years and scenarios.

CHAMPVA Cost and Enrollment Projections

Background

PCAFC caregivers are eligible for CHAMPVA medical coverage in the event they do not have other medical coverage. The majority of PCAFC caregivers are also eligible for CHAMPVA medical coverage through the CHAMPVA program. For example, a spouse of a Veteran that is a PCAFC sponsor may be eligible through the CHAMPVA program. If this spouse is also the caregiver for the Veteran, the spouse may also be eligible for CHAMPVA benefits through the PCAFC program.

A minority of caregivers are only eligible for CHAMPVA benefits through the PCAFC program. For example, an unrelated person serving as a caregiver would not otherwise be eligible for CHAMPVA. The CHAMPVA expense for the PCAFC program is limited to the caregivers eligible for CHAMPVA only through the PCAFC program.

Projections

The cost of CHAMPVA benefits utilized by PCAFC caregivers was projected using the CHAMPVA experience from FY 2019.

The projections reflect CHAMPVA enrollment pattern by sponsor age band, caregiver age bands, and caregiver relationship. First, historical PCAFC eligibility by caregiver relationship (spouse, child, parent, sibling, and other) was summarized by sponsor age band in order to understand how the distribution of caregiver relationship type changes as sponsor's age. For example, younger sponsors may depend more on their parents and spouses to provide caregiver services whereas older sponsors may depend more heavily on their children to provide caregiver services. For sponsors aged 65 and older, the distribution of these relationships was estimated because there is not enough historical PCAFC data to summarize these amounts.

Historical PCAFC eligibility is then summarized by caregiver relationship and sponsor age band, limited to caregivers eligible for CHAMPVA benefits as a primary caregiver not otherwise eligible for CHAMPVA under the traditional CHAMPVA eligibility requirements. The caregiver relationship distribution is applied to this data to estimate the percent of sponsors with CHAMPVA-eligible caregivers by sponsor age band and caregiver relationship type. These percentages were then allocated to caregiver age

band to calculate the percentage of caregivers eligible for CHAMPVA benefits by sponsor age band. These percentages are applied to the projected sponsor counts by age band to determine the projected caregivers eligible for CHAMPVA by age band.

CHAMPVA benefit expense is expected to vary by age band. The cost differences by age band were developed using actual CHAMPVA cost data by age band for CHAMPVA spouses. The assumed CHAMPVA enrollment was set to 0 for ages 65 and older because nearly all caregivers aged 65 and older are eligible for Medicare benefits thereby disqualifying them for CHAMPVA benefits¹³. The resulting cost relativity by age band was then applied to the projected CHAMPVA-eligible caregivers by age band to determine the projected CHAMPVA cost. These costs were then calibrated by actual FY 2019 CHAMPVA expenses. CHAMPVA cost projections are included in Exhibits 2e and 3e.

Mental Health and Respite Care Cost Projections

Caregivers are eligible for mental health benefits. Sponsors may also use respite care services to give their caregiver a temporary break from caring from their sponsor.

Mental Health

For the mental health cost projection, we estimated mental health utilization rates by age band using information from the Milliman 2020 Health Cost Guidelines (HCGs). The FY 2019 cost per caregiver by age band was calibrated to the FY 2019 mental health obligations and the utilization rates. This cost per age band per year was trended forward to all projection years using mental health office visit utilization and unit cost trends from the BY18 EHCPM projection scenario BBA8. The projected cost per age band per year was applied to projected caregiver counts by age band, service era, and fiscal year in order to produce total projected mental health costs by year.

Respite Care

For the respite care benefits, we summarized actual FY 2019 respite care utilization from the VHA enrollee baseline data. We are able to do this because respite care services are linked to the sponsor, rather than the caregiver. This experience was summarized by age band and tier level since respite care use increases with tier level. Ultimately, the respite care utilization rate was set only by tier level since we did not see a clear relationship between respite care usage and age band in the current PCAFC population. Total FY 2019 respite care cost was paired with the tier relativity to calculate the respite care cost per sponsor in FY 2019. These costs were trended to projection

¹³ PCAFC sponsors who do not qualify for CHAMPVA under CHAMPVA's traditional eligibility requirements may only use CHAMPVA if they do not have other coverage options. Medicare qualifies as other coverage, so caregivers aged 65 years and older are rarely eligible for CHAMPVA benefits.

years using the home respite care utilization and unit cost trends from the BY18 EHCPM projection scenario BBA8.

Note that the FY 2019 respite care services obligations were significantly higher than in FY 2017 and prior. This was because the PCAFC program began reimbursing respite care for sponsors of both primary and general caregivers starting in FY 2018, rather than just primary caregivers. The services were already being provided for sponsors of general caregivers prior to FY 2018, but the PCAFC did not fund these services.

Data Sources

The projections primarily relied on the following data sources:

- 1. VetPop2016 Projections, BY18 VetPop Proxy, VETSNET database
- 2. Historical PCAFC Sponsor and Caregiver Enrollment
- 3. CHAMPVA Beneficiary Enrollment
- 4. BY18 EHCPM Trends, Scenario BBA8
- 5. Milliman 2020 Health Cost Guideline (HCG)
- 6. FY 2018 Home Health Related Services User Prevalence
- 7. GS-4-1 Payment Rates
- 8. Bureau of Labor and Statistics OEF Home Health Aide Pay Rate
- 9. FMS Obligations
- 10. Mapping of BLS Area and GS Locality by Veteran, from the file "Master Table V4 Hand Corrected Errors.xlsx"

VetPop2016:

The VetPop2016 projections are used as the pool of Veterans potentially eligible for enrollment in the PCAFC. Enrollment probabilities are applied to the VetPop2016 counts by service era to determine the projected counts of Veteran sponsors. VetPop2016 projections as of beginning-of-year FY 2016 through FY 2046 by service era and age band were provided by PAA. These projections were then allocated to gender and disability level using the BY18 VetPop Proxy and VETSNET data. The BY18 VetPop Proxy was used to first allocate the total VetPop counts by age band into gender and priority level. The VETSNET was then used to allocate each priority level into levels of service-connected disability. VetPop counts for fiscal years prior to 2016 were estimated by backcasting the FY 2016 Veteran counts from VetPop2016.

<u>Historical PCAFC Sponsor and Caregiver Enrollment:</u>

Historical PCAFC detailed enrollment records were provided to help develop a variety of assumptions including the enrollment probabilities. The enrollment records includes information such as, but not limited to, sponsor and caregiver demographic information, tier level, dates of eligibility including application date, enrollment date, benefit end date, and revocation date. Each record corresponds to an approved application.

Separate data extracts were also provided that include disapproved applications, as well as applications still in the course of adjudication as of the end of the fiscal year. A Veteran sponsor may have multiple enrollment records if they have had multiple applications. This data was used to flag whether or not a sponsor was active during each fiscal year such that unique sponsor counts could be developed.

CHAMPVA Beneficiary Enrollment:

CHAMPVA beneficiary enrollment information was provided including enrollment data for PCAFC caregivers who qualify for CHAMPVA benefits. There are two main ways in which a PCAFC caregiver may be eligible for CHAMPVA benefits.

- 1. They may be eligible as a child or spouse of a CHAMPVA sponsor under the traditional CHAMPVA eligibility requirements. Caregivers who meet this criteria are projected in the CHAMPVA projections as a qualifying spouse or child.
- Alternatively, they may be a PCAFC primary caregiver without any other primary health coverage. Caregivers who meet this criteria are projected in the PCAFC projections.

Unique counts of PCAFC caregivers under each of these eligibility types were provided by month through FY 2019, and are used to calibrate the projections of caregiver CHAMPVA eligibility projections.

BY18 EHCPM Trends, Scenario BBA8:

Trends from the BY18 EHCPM projection scenario BBA8 were used to project mental health and respite care utilization and unit cost. For mental health services, utilization and unit cost trends for the Mental Health Office Visits HSC (HM086_086) was used. For respite care service, utilization and unit cost trends for the Home Respite Care HSC (HM357_357) was used.

Milliman 2020 Health Cost Guideline (HCG):

The 2020 HCGs were used to assume how the usage of mental health services varies by age band. The Commercial HCGs were used to assume the age relativity for ages 0 through 64 and for 65+ in aggregate. The 65 and older HCGs were used to further allocate this 65+ bucket into individual age bands.

FY 2018 Home Health User Prevalence:

Priority 1a users of home health services in FY 2018 summarized by age band was used as the basis for the assumption of how PCAFC sponsor enrollment may increase with age. In particular, for age bands with little to no PCAFC enrollment experience, the assumed enrollment probabilities are assumed to increase over the younger PCAFC enrollment levels at the same rate as usage of home health services increases with age.

GS-4-1 Payment Rates:

GS-4-1 base payment rates and GS Locality adjustments were downloaded from the GS website. The GS-4-1 fee schedule is assumed to increase each fiscal year consistent with BY18 EHCPM budget scenario BBA8 wage increase assumptions.

FMS Obligations:

PCAFC staff provided FY 2019 obligations for all cost components of the PCAFC and PGCSS. This includes obligations for stipend payments, CHAMPVA benefits, respite care benefits, mental health benefits, caregiver travel benefits, oversight expenses, and legislative expenses. The stipend, CHAMPVA, mental health, and respite care obligations are used to calibrate the FY 2019 projections in the model.

Caveats and Limitations

This communication and any associated analysis or data were prepared to provide assistance to the Department of Veterans Affairs. These deliverables are solely for the use and benefit of the Department of Veterans Affairs and may not be appropriate for other uses.

Milliman recognizes that materials it delivers to the Department of Veterans Affairs may be public records subject to disclosure to third parties, however, neither the Department of Veterans Affairs nor Milliman intend to benefit and assume no duty or liability to any third parties who receive Milliman's work and may include disclaimer language on Milliman's work product so stating. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, the Department of Veterans Affairs agrees that it shall not disclose Milliman's work product to third parties without Milliman's prior written consent; provided, however, that the Department of Veterans Affairs may distribute Milliman's work to (i) its professional service providers who are subject to a duty of confidentiality and who agree to not use Milliman's work product for any purpose other than to provide services to the Department of Veterans Affairs, or (ii) any applicable regulatory or governmental agency, as required. Milliman recommends any recipient be aided by its own actuary or other qualified professional when reviewing the Milliman work product.

This analysis relies in part on data and other listings provided by various personnel at the Department of Veterans Affairs. That data has been reviewed for reasonableness and compared to past data submissions and other information, when possible. The information has not been audited by Milliman for accuracy. If the data or other listings are inaccurate or incomplete, this analysis may also be inaccurate or incomplete. The results contained in these reports are projections based on modeling assumptions and historical data. Actual results will differ for many reasons. For example, it is impossible to determine how world events will unfold. Those events that impact the economy and the use of the nation's military may have a profound impact on enrollment and expenditure projections. In addition, many of the modeling variables are assumed to be constant over time, which may not match actual events. This analysis has not attempted to present results for all possible or even all likely outcomes. Emerging experience should be continually monitored and adjustments are made, as appropriate.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. I am a member of the American Academy of Actuaries, and I meet the qualification standards for performing the analyses in this report.

Appendix B: BLS and GS Wage Systems

This analysis sets out to show that BLS wages and GS wages generally follow the same patterns of growth both on a national level and on a regional level.

The "Home Health Aide" occupation reported by BLS is the most representative of VA Caregivers. Home health aides, "Provide routine individualized healthcare such as changing bandages and dressing wounds, and applying topical medications to the elderly, convalescents, or persons with disabilities at the patient's home or in a care facility. Monitor or report changes in health status. May also provide personal care such as bathing, dressing, and grooming of patient." ¹⁵

Measuring the Private Market Wage

The Occupational Employment Statistics program is the only comprehensive source of regularly produced occupational employment and wage rate information for the U.S. economy, as well as States, the District of Columbia, Guam, Puerto Rico, the U.S. Virgin Islands, and all metropolitan and nonmetropolitan areas in each State. Therefore, VA has chosen to use the OES data for our analysis.¹⁶

To measure the private market wage, we used the median annual wage reported by Bureau of Labor Statistics in their Occupational Employment Statistics release at a national level. The median is a better measure of wages for your "average" home health aide because it is not skewed by outliers. The nominal national median wage for a home health aide was \$24,200 in 2018.

BLS Median Wages in GS Adjusted Localities

Assumptions:

- 1. The time period for this analysis is 2018, the latest data available from BLS.
- 2. The MSAs considered GS locality adjusted areas are areas that received locality adjustments in each year from 2012 to 2018.
 - a. Findings therefore exclude Birmingham, Corpus Christi, Omaha, San Antonio, and Virginia Beach since they are not deemed GS Locality Adjusted Areas in all years.
- Analysis excludes Alaska and Hawaii because the entire state is deemed a
 locality area, but only small portions of the states are represented by MSAs. It
 would be inaccurate to equate the behavior of MSAs to the behavior of the entire
 state.

¹⁵ https://www.bls.gov/oes/current/oes311011.htm

¹⁴ BLS Code 31-1011

¹⁶ https://www.bls.gov/oes/oes_ques.htm#overview

4. In cases where a GS locality named multiple cities, the first city named on the GS adjustment was mapped to the MSA data from BLS. GS localities therefore do not align perfectly to MSAs called out in this analysis.

Findings:

Of the 44 locality adjusted areas analyzed, 24 areas had a BLS median private sector wage that was less than the BLS national median wage in 2018. 20 areas had a BLS median wage that was above the BLS national median wage in 2018.

The Huntsville area had a local wage that was the furthest below the national median in 2018 (24 percent below). The Sacramento area had a local wage that was the furthest above the national median in 2018 (48 percent above). Other areas where the local median was more than 20 percent above the national median were Minneapolis (22 percent above), Boston (25 percent above), and Las Vegas (27 percent above).

GS Locality Adjustments

Assumptions:

- 1. The time period for this analysis is from 2012 to 2018.
- 2. The GS locality adjusted areas presented are areas that received locality adjustments in all years of analysis.
- 3. Analysis excludes Alaska and Hawaii.
- 4. These results do not include the overall increase made to the entire GS scale in each year, only the published locality adjustment rate.

Findings:

Table A: GS Locality Adjustments from 2012 to 2018 (Percent)

	2012	2013	2014	2015	2016	2017	2018
ALBANY-SCHENECTADY, NY-MA	14.2	14.2	14.2	14.2	14.2	15.9	16.5
ALBUQUERQUE-SANTA FE-LAS VEGAS, NM	14.2	14.2	14.2	14.2	14.4	15.4	15.8
ATLANTAATHENS-CLARKE COUNTYSANDY SPRINGS, GA-AL	19.3	19.3	19.3	19.3	19.6	20.7	21.2
AUSTIN-ROUND ROCK, TX	14.2	14.2	14.2	14.2	14.5	16.0	16.7
BOSTON-WORCESTER- PROVIDENCE, MA-RI-NH-ME	24.8	24.8	24.8	24.8	25.2	26.7	27.5
BUFFALO-CHEEKTOWAGA, NY	17.0	17.0	17.0	17.0	17.3	18.7	19.2
CHARLOTTE-CONCORD, NC-SC	14.2	14.2	14.2	14.2	14.4	15.7	16.2
CHICAGO-NAPERVILLE, IL-IN-WI	25.1	25.1	25.1	25.1	25.4	26.9	27.5
CINCINNATI-WILMINGTON- MAYSVILLE, OH-KY-IN	18.6	18.6	18.6	18.6	18.8	19.5	19.9
CLEVELAND-AKRON-CANTON, OH	18.7	18.7	18.7	18.7	18.9	19.7	20.1
COLORADO SPRINGS, CO	14.2	14.2	14.2	14.2	14.5	16.0	16.6
COLUMBUS-MARION-ZANESVILLE, OH	17.2	17.2	17.2	17.2	17.4	18.5	19.0
DALLAS-FORT WORTH, TX-OK	20.7	20.7	20.7	20.7	21.0	22.6	23.4

DAVENDORT MOUNT IA II	14.2	14.2	14.2	14.2	14.4	15.6	16.1
DAVENPORT-MOLINE, IA-IL	16.2	16.2	16.2	16.2	16.5	17.6	18.1
DAYTON-SPRINGFIELD-SIDNEY, OH	_			_			
DENVER-AURORA, CO	22.5	22.5	22.5	22.5	22.9	24.7	25.5
DETROIT-WARREN-ANN ARBOR, MI	24.1	24.1	24.1	24.1	24.4	25.7	26.3
HARRISBURG-LEBANON, PA	14.2	14.2	14.2	14.2	14.5	15.6	16.2
HARTFORD-WEST HARTFORD, CT-MA	25.8	25.8	25.8	25.8	26.2	27.6	28.2
HOUSTON-THE WOODLANDS, TX	28.7	28.7	28.7	28.7	29.1	31.0	31.7
HUNTSVILLE-DECATUR- ALBERTVILLE, AL	16.0	16.0	16.0	16.0	16.4	17.8	18.5
INDIANAPOLIS-CARMEL-MUNCIE, IN	14.7	14.7	14.7	14.7	14.9	15.9	16.2
KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS	14.2	14.2	14.2	14.2	14.5	15.6	16.1
LAREDO, TX	14.2	14.2	14.2	14.2	14.6	16.7	17.4
LAS VEGAS-HENDERSON, NV-AZ	14.2	14.2	14.2	14.2	14.6	15.9	16.5
LOS ANGELES-LONG BEACH, CA	27.2	27.2	27.2	27.2	27.7	29.7	30.6
MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL	20.8	20.8	20.8	20.8	21.1	22.1	22.6
MILWAUKEE-RACINE-WAUKESHA, WI	18.1	18.1	18.1	18.1	18.4	19.6	20.1
MINNEAPOLIS-ST. PAUL, MN-WI	21.0	21.0	21.0	21.0	21.3	22.7	23.4
NEW YORK-NEWARK, NY-NJ-CT-PA	28.7	28.7	28.7	28.7	29.2	31.2	32.1
PALM BAY-MELBOURNE-TITUSVILLE, FL	14.2	14.2	14.2	14.2	14.4	15.5	15.9
PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD	21.8	21.8	21.8	21.8	22.2	23.9	24.6
PHOENIX-MESA-SCOTTSDALE, AZ	16.8	16.8	16.8	16.8	17.1	18.6	19.1
PITTSBURGH-NEW CASTLE- WEIRTON, PA-OH-WV	16.4	16.4	16.4	16.4	16.7	17.9	18.4
PORTLAND-VANCOUVER-SALEM, OR-WA	20.4	20.4	20.4	20.4	20.7	22.0	22.5
RALEIGH-DURHAM-CHAPEL HILL, NC	17.6	17.6	17.6	17.6	17.9	19.0	19.5
RICHMOND, VA	16.5	16.5	16.5	16.5	16.8	18.2	18.8
SACRAMENTO-ROSEVILLE, CA-NV	22.2	22.2	22.2	22.2	22.6	24.1	24.9
SAN DIEGO-CARLSBAD, CA	24.2	24.2	24.2	24.2	24.7	27.0	27.9
SAN JOSE-SAN FRANCISCO- OAKLAND, CA	35.2	35.2	35.2	35.2	35.8	38.2	39.3
SEATTLE-TACOMA, WA	21.8	21.8	21.8	21.8	22.3	24.2	25.1
ST. LOUIS-ST. CHARLES- FARMINGTON, MO-IL	14.2	14.2	14.2	14.2	14.5	15.8	16.5
TUCSON-NOGALES, AZ	14.2	14.2	14.2	14.2	14.5	15.7	16.2
WASHINGTON-BALTIMORE- ARLINGTON, DC-MD-VA-WV-PA	24.2	24.2	24.2	24.2	24.8	27.1	28.2

Comparing Geographic Variation in BLS Wages to GS Adjustments

Assumptions:

- 1. The time period for this analysis is from 2012 to 2018, the latest data available from BLS.
- 2. The MSAs considered GS locality adjusted areas are areas that received locality adjustments in all years of analysis.
 - a. Findings therefore exclude Birmingham, Corpus Christi, Omaha, San Antonio, and Virginia Beach since they are not deemed GS Locality Adjusted Areas in all years.
- Analysis excludes Alaska and Hawaii because the entire state is deemed a
 locality area, but only small portions of the states are represented by MSAs. It
 would be inaccurate to equate the behavior of MSAs to the behavior of the entire
 state.
- 4. Analysis on growth excludes Laredo in 2013 because MSA level data is not available from BLS in 2012.
- 5. In cases where a GS locality named multiple cities, the first city named on the GS adjustment was mapped to the MSA data from BLS. GS localities therefore do not align perfectly to MSAs called out in this analysis.

Findings:

In 6 of the 7 years considered, Boston had a higher private sector differential (local median wage relative to the national median) than GS adjustment. The GS adjustment in Sacramento was larger than the private sector differential from 2012 through 2015; however, from 2016 on, the private sector differential has been larger than the GS adjustment. Another area that drew attention was Las Vegas, where the private sector differential outpaced the GS adjustment by 10 percentage points in 2018.

To see a time trend and pinpoint areas where the GS adjustment is consistently below the private sector differential, these yearly data points were averaged over the time period from 2012 to 2018. This analysis showed that the Boston area is the only location where GS wage adjustments have not been enough to keep up with the private sector differential over the time horizon.

Mapping the National Median Wage to the GS Scale

The 2018 national median wage in for home health aides was \$24,200.¹⁷ To map this to the latest GS scale, it needs to be inflated to December 2019 dollars, so these values are in the same terms. This was done using the CPI specific to "Care of invalids, elderly, and convalescents in the home." This index measures the consumer price change in fees paid to individuals or agencies for the personal care of invalids, elderly or convalescents in the home including food preparation, bathing, light house cleaning, and other services over time.¹⁸ Using this inflation measure, the 2018 national median

¹⁷ Wages reported by BLS are reported in May 2018 dollars.

¹⁸ https://www.bls.gov/cpi/factsheets/medical-care.htm

wage equates to \$25,277 in December 2019 dollars. This payment maps to a GS 3-3 on the national 2020 payment schedule.¹⁹

The GS 3 Step 3 Wage at a Local Level

Assumptions:

- 1. The time period for this analysis is from 2012 to 2018, the latest data available from BLS.
- 2. The MSAs considered GS locality adjusted areas are areas that received locality adjustments in all years of analysis.
 - a. Findings therefore exclude Birmingham, Corpus Christi, Omaha, San Antonio, and Virginia Beach since they are not deemed GS Locality Adjusted Areas in all years.
- Analysis excludes Alaska and Hawaii because the entire state is deemed a
 locality area, but only small portions of the states are represented by MSAs. It
 would be inaccurate to equate the behavior of MSAs to the behavior of the entire
 state.
- 4. In cases where a GS locality named multiple cities, the first city named on the GS adjustment was mapped to the MSA data from BLS. GS localities therefore do not align perfectly to MSAs called out in this analysis.
- 5. The inflation measure used is the CPI specific to "Care of invalids, elderly, and convalescents in the home" to inflate BLS 2018 wages to December 2019.

Findings:

To identify which GS adjusted localities at the GS 3 Step 3 would have wages less than the private rate, the locality adjusted GS wage rate was compared to the BLS median wage rate in each GS adjusted location. This analysis shows that all GS adjusted regions receive more than the private sector median wage in the area under a GS 3 Step 3 besides Davenport, Las Vegas, and Sacramento.

In Davenport a GS 3 Step 4 is required to meet the median of the private sector's 2018 data after inflation. In Las Vegas this results in a GS 4 Step 2, and in Sacramento a GS 4 Step 4.

Table B: Difference Between BLS Median Wage and GS 3-3 Wage in GS Adjusted Localities

Localitios					
	BLS Me Wage	edian	-3 Locality sted Wage	betv	ference ween GS ge and BLS ge
ALBANY-SCHENECTADY, NY-MA	\$	26,739	\$ 30,147	\$	3,408
ALBUQUERQUE-SANTA FE-LAS VEGAS,			_		
NM	\$	24,263	\$ 29,840	\$	5,577

¹⁹ https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/2020/general-schedule/

SANDY SPRINGS, GA-AL AUSTIN-ROUND ROCK, TX \$ 21,067 \$ 30,221 \$ 9,154 BOSTON-WORCESTER-PROVIDENCE, MA-RI-NH-ME \$ 31,533 \$ 33,019 \$ 1,486 BUFFALO-CHEEKTOWAGA, NY \$ 25,903 \$ 30,740 \$ 4,837 CHARLOTTE-CONCORD, NC-SC \$ 21,548 \$ 30,034 \$ 8,486 CHICAGO-NAPERVILLE, IL-IN-WI \$ 25,266 \$ 32,886 \$ 7,620 CINCINNATI-WILMINGTON- MAYSVILLE, OH-KY-IN \$ 24,420 \$ 30,829 \$ 6,409 CLEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,899 \$ 8,098 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY, MO-KS \$ 22,727 \$ 33,863 \$ 4,116 MILMANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY, MO-KS \$ 23,511 \$ 31,586 \$ 8,075 MILMANAPOLIS-CARMEL-MUNCIE, IN \$ 24,723 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,905 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,905 \$ 1,939 LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MILMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,660 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WW \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,660 \$ 31,645 \$ 5,585	ATLANTAATHENS-CLARKE COUNTY						
BOSTON-WORCESTER-PROVIDENCE, MA-RI-NH-ME	SANDY SPRINGS, GA-AL	\$	24,232	\$	31,241	\$	7,009
MA-RI-NH-ME \$ 31,533 \$ 33,019 \$ 1,486 BUFFALO-CHEEKTOWAGA, NY \$ 25,903 \$ 30,740 \$ 4,837 CHARLOTTE-CONCORD, NC-SC \$ 21,548 \$ 30,034 \$ 8,486 CHICAGO-NAPERVILLE, IL-IN-WI \$ 25,266 \$ 32,886 \$ 7,620 CINCINNATI-WILMINGTON-MAYSYILLE, OH-KY-IN \$ 24,420 \$ 30,829 \$ 6,409 CLEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,829 \$ 6,409 CLEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,899 \$ 8,098 COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAYTON-SPRINGFIELD-SIDNEY, OH \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 <td< td=""><td>AUSTIN-ROUND ROCK, TX</td><td>\$</td><td>21,067</td><td>\$</td><td>30,221</td><td>\$</td><td>9,154</td></td<>	AUSTIN-ROUND ROCK, TX	\$	21,067	\$	30,221	\$	9,154
BUFFALO-CHEEKTOWAGA, NY \$ 25,903 \$ 30,740 \$ 4,837 CHARLOTTE-CONCORD, NC-SC \$ 21,548 \$ 30,034 \$ 8,486 CHICAGO-NAPERVILLE, II-IN-WI \$ 25,266 \$ 32,886 \$ 7,620 CHICAGO-NAPERVILLE, II-IN-WI \$ 25,266 \$ 32,886 \$ 7,620 CHICAGO-NAPERVILLE, II-IN-WI \$ 24,420 \$ 30,829 \$ 6,409 CLEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,829 \$ 8,098 COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 COLORADO SPRINGS, CO \$ 23,699 \$ 30,694 \$ 6,995 COLORADO SPRINGS, CO \$ 23,699 \$ 30,694 \$ 6,995 COLORADO SPRINGS, CO \$ 23,699 \$ 30,694 \$ 6,995 COLORADO SPRINGS, CO \$ 23,699 \$ 30,694 \$ 6,995 COLORADO SPRINGS, CO \$ 23,093 \$ 3,962 \$ 10,947 COLORADO SPRINGS, II-IL \$ 29,935 \$ 29,932 \$ (3) COLORADO SPRINGS, II-IL \$ 29,935 \$ 29,932 \$ (3) COLORADO SPRINGS, II-IL \$ 29,935 \$ 29,932 \$ (3) COLORADO SPRINGS, II-IL \$ 29,935 \$ 29,932 \$ (3) COLORADO SPRINGS, II-IL \$ 24,253 \$ 32,561 \$ 8,308 COLORADO SPRINGS, II-IL \$ 24,253 \$ 32,561 \$ 8,308 COLORADO SPRINGS, II-IL \$ 24,253 \$ 32,561 \$ 8,308 COLORADO SPRINGS, II-IL \$ 24,253 \$ 32,561 \$ 8,308 COLORADO SPRINGS, II-IL \$ 24,253 \$ 33,116 \$ 6,523 COLORADO SPRINGS, II-IL \$ 29,993 \$ 32,512 \$ 5,773 COLORADO SPRINGS, II-IL \$ 29,993 \$ 32,512 \$ 5,773 COLORADO SPRINGS, II-IL \$ 29,901 \$ 5,188 COLORADO SPRINGS, II-IL \$ 24,713 \$ 29,901 \$ 5,188 COLORADO SPRINGS, II-IL \$ 24,713 \$ 29,901 \$ 5,188 COLORADO SPRINGS, II-IL \$ 24,713 \$ 29,901 \$ 5,188 COLORADO SPRINGS, II-IL \$ 24,713 \$ 29,901 \$ 5,188 COLORADO SPRINGS, II-IL \$ 24,713 \$ 29,901 \$ 5,188 COLOR	BOSTON-WORCESTER-PROVIDENCE,						
CHARLOTTE-CONCORD, NC-SC	MA-RI-NH-ME		31,533	\$	33,019		1,486
CHICAGO-NAPERVILLE, IL-IN-WI \$ 25,266 \$ 32,886 \$ 7,620 CINCINNATI-WILMINGTON-MAYSVILLE, OH-KY-IN \$ 24,420 \$ 30,829 \$ 6,409 CIEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,899 \$ 8,098 COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK-KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ 11,939 LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILDELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,224 \$ 30,535 \$ 5,311 PORTION-VANCOUVER-SALEM, OR-WA \$ 26,600 \$ 31,645 \$ 5,585	BUFFALO-CHEEKTOWAGA, NY	\$	25,903	\$	30,740	\$	4,837
CINCINNATI-WILMINGTON-MAYSYILLE, OH-KY-IN \$ 24,420 \$ 30,829 \$ 6,409 CLEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,899 \$ 8,098 COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 33,116 \$ 6,523 HARTISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,052 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, \$ 19,260	CHARLOTTE-CONCORD, NC-SC	\$	21,548	\$	30,034	\$	8,486
MAYSVILLE, OH-KY-IN \$ 24,420 \$ 30,829 \$ 6,409 CLEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,899 \$ 8,098 COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK-KANSAS CITY-OVERLAND PARK-KANSAS CITY-OVERLA	CHICAGO-NAPERVILLE, IL-IN-WI	\$	25,266	\$	32,886	\$	7,620
CLEVELAND-AKRON-CANTON, OH \$ 22,801 \$ 30,899 \$ 8,098 COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAYPON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY, OVERLAND PARK-KANSAS CITY, OVERLAND PARK-KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX<	CINCINNATI-WILMINGTON-						
COLORADO SPRINGS, CO \$ 25,736 \$ 30,121 \$ 4,385 \$ COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 \$ DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK-KANSAS CITY-OVERLAND PARK-KANSAS CITY-OVERLAND PARK-KANSAS CITY-OVERLAND PARK-KANSAS CITY-OVERLAND PARK-KANSAS CITY-OVERLAND PARK-KANSA CITY-OVERLAND PARK-	MAYSVILLE, OH-KY-IN		24,420	\$	30,829	\$	6,409
COLUMBUS-MARION-ZANESVILLE, OH \$ 23,699 \$ 30,694 \$ 6,995 DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK- \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY, MO-KS \$ 25,287 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,995 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747	CLEVELAND-AKRON-CANTON, OH	1	22,801	\$	30,899	\$	8,098
DALLAS-FORT WORTH, TX-OK \$ 21,015 \$ 31,962 \$ 10,947 DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3) DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 30,934 \$ 6,180 NINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA	COLORADO SPRINGS, CO	\$	25,736	\$	30,121	\$	4,385
DAVENPORT-MOLINE, IA-IL \$ 29,935 \$ 29,932 \$ (3)	COLUMBUS-MARION-ZANESVILLE, OH	\$	23,699	\$	30,694	\$	6,995
DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK-KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST.	DALLAS-FORT WORTH, TX-OK	\$	21,015	\$	31,962	\$	10,947
DAYTON-SPRINGFIELD-SIDNEY, OH \$ 23,073 \$ 30,479 \$ 7,406 DENVER-AURORA, CO \$ 26,739 \$ 32,512 \$ 5,773 DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK-KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST.	DAVENPORT-MOLINE, IA-IL	\$	29,935	\$	29,932	\$	(3)
DETROIT-WARREN-ANN ARBOR, MI \$ 24,253 \$ 32,561 \$ 8,308 HARRISBURG-LEBANON, PA \$ 23,908 \$ 29,973 \$ 6,065 HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA	DAYTON-SPRINGFIELD-SIDNEY, OH	\$	23,073	\$	30,479	\$	7,406
HARRISBURG-LEBANON, PA	DENVER-AURORA, CO	\$	26,739	\$	32,512	\$	5,773
HARRISBURG-LEBANON, PA	DETROIT-WARREN-ANN ARBOR, MI	\$	24,253	\$	32,561	\$	8,308
HARTFORD-WEST HARTFORD, CT-MA \$ 26,593 \$ 33,116 \$ 6,523 HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA	HARRISBURG-LEBANON, PA		23,908	\$	29,973		6,065
HOUSTON-THE WOODLANDS, TX \$ 20,900 \$ 34,095 \$ 13,195 HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585	HARTFORD-WEST HARTFORD, CT-MA				•	+	
HUNTSVILLE-DECATUR-ALBERTVILLE, AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR- WA \$ 26,060 \$ 31,645 \$ 5,585	·	+			•		
AL \$ 19,260 \$ 30,650 \$ 11,390 INDIANAPOLIS-CARMEL-MUNCIE, IN \$ 24,713 \$ 29,901 \$ 5,188 KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585			,		,	İ	
KANSAS CITY-OVERLAND PARK- KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA		\$	19,260	\$	30,650	\$	11,390
KANSAS CITY, MO-KS \$ 25,287 \$ 29,955 \$ 4,668 LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585	INDIANAPOLIS-CARMEL-MUNCIE, IN	\$	24,713	\$	29,901	\$	5,188
LAREDO, TX \$ 19,845 \$ 30,402 \$ 10,557 LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA	KANSAS CITY-OVERLAND PARK-						
LAS VEGAS-HENDERSON, NV-AZ \$ 32,034 \$ 30,095 \$ (1,939) LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585	KANSAS CITY, MO-KS	\$	25,287	\$	29,955	\$	4,668
LOS ANGELES-LONG BEACH, CA \$ 29,747 \$ 33,863 \$ 4,116 MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585	LAREDO, TX	\$	19,845	\$	30,402	\$	10,557
MIAMI-FORT LAUDERDALE-PORT ST. LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585	LAS VEGAS-HENDERSON, NV-AZ	\$	32,034	\$	30,095	\$	(1,939)
LUCIE, FL \$ 23,511 \$ 31,586 \$ 8,075 MILWAUKEE-RACINE-WAUKESHA, WI \$ 24,754 \$ 30,934 \$ 6,180 MINNEAPOLIS-ST. PAUL, MN-WI \$ 30,812 \$ 31,881 \$ 1,069 NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA	LOS ANGELES-LONG BEACH, CA	\$	29,747	\$	33,863	\$	4,116
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NEW YORK-NEWARK, NY-NJ-CT-PA \$ 25,841 \$ 34,264 \$ 8,423 PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585	MILWAUKEE-RACINE-WAUKESHA, WI	\$	24,754	\$	30,934	\$	6,180
PALM BAY-MELBOURNE-TITUSVILLE, FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR-WA \$ 26,060 \$ 31,645 \$ 5,585	MINNEAPOLIS-ST. PAUL, MN-WI	\$	30,812	\$	31,881	\$	1,069
FL \$ 25,141 \$ 29,853 \$ 4,712 PHILADELPHIA-READING-CAMDEN, PA-NJ-DE-MD \$ 25,673 \$ 32,233 \$ 6,560 PHOENIX-MESA-SCOTTSDALE, AZ \$ 25,496 \$ 30,719 \$ 5,223 PITTSBURGH-NEW CASTLE-WEIRTON, PA-OH-WV \$ 25,224 \$ 30,535 \$ 5,311 PORTLAND-VANCOUVER-SALEM, OR- WA \$ 26,060 \$ 31,645 \$ 5,585	NEW YORK-NEWARK, NY-NJ-CT-PA	\$	25,841	\$	34,264	\$	8,423
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	•	Ś	26.060	\$	31.645	Ś	5,585
	RALEIGH-DURHAM-CHAPEL HILL, NC	\$	24,744	\$	30,814	\$	6,070

RICHMOND, VA	\$ 23,282	\$ 30,676	\$ 7,394
SACRAMENTO-ROSEVILLE, CA-NV	\$ 37,382	\$ 32,318	\$ (5,064)
ST. LOUIS-ST. CHARLES-FARMINGTON,			
MO-IL	\$ 24,681	\$ 30,088	\$ 5,407
SAN DIEGO-CARLSBAD, CA	\$ 30,071	\$ 33,187	\$ 3,116
SAN JOSE-SAN FRANCISCO-OAKLAND,			
CA	\$ 29,214	\$ 36,172	\$ 6,958
SEATTLE-TACOMA, WA	\$ 29,768	\$ 32,484	\$ 2,716
TUCSON-NOGALES, AZ	\$ 25,256	\$ 29,970	\$ 4,714

Growth Rates of BLS Median Wage and GS Wage

Assumptions:

- 1. The time period for this analysis is from 2012 to 2018, the latest data available from BLS.
- 2. The MSAs considered GS locality adjusted areas are areas that received locality adjustments in all years of analysis.
 - a. Findings therefore exclude Birmingham, Corpus Christi, Omaha, San Antonio, and Virginia Beach since they are not deemed GS Locality Adjusted Areas in all years.
- 3. Analysis excludes Alaska and Hawaii because the entire state is deemed a locality area, but only small portions of the states are represented by MSAs. It would be inaccurate to equate the behavior of MSAs to the behavior of the entire state.
- 4. Analysis on growth excludes Laredo in 2013 because MSA level data is not available from BLS in 2012.
- In cases where a GS locality named multiple cities, the first city named on the GS adjustment was mapped to the MSA data from BLS. GS localities therefore do not align perfectly to MSAs called out in this analysis.
- 6. The GS "Rest of the US" is compared to the national level data for BLS as data restrictions prevent an accurate mapping.

Findings:

This section will analyze the relationship between the US median wage of home health aides and the GS schedule. There are two buckets of wages necessary to distinguish when looking at GS wage growth. The first bucket are the localities that receive a GS locality adjusted payment. The second bucket is the "Rest of the US", or all areas that do not.

Table C: Growth Rates of BLS and GS Wage Systems

		2013	2014	2015	2016	2017	2018	Average
GS Wag	Growth of GS Base Pay	0.00	1.00	1.00	1.00	1.00	1.40	0.90

	Growth of Wages in Rest of US (Base Schedule plus "Rest of US" locality adjustment)		0.00		1.00	1.00	2.34	5.95		3.46	2.29
	Average Growth of Wages across GS Adjusted Localities (Base Schedule plus Locality Adjustment)		0.00		0.98	0.98	2.76	8.29		4.35	2.89
/ages	Growth of Median Wage Across US	0.96		0.96 1.71		2.53	3.10	2.70	4.27		2.54
BLS Wages	Growth of Wages in GS Adjusted Localities*	-0.98			2.84	2.02	3.77	2.98		2.20	2.14
ges	Median Wage in US	\$	21,020	\$	21,380	\$ 21,920	\$ 22,600	\$ 23,210	\$	24,200	\$ 22,388
BLS Wages	Average Median Wages in GS Adjusted Localities*	\$	22,264	\$	21,992	\$ 22,566	\$ 23,013	\$ 23,902	\$	24,601	\$ 23,056

From 2013 to 2018, BLS median wages across the US for home health aides grew an average of 2.5 percent per year while GS rates for the "rest of the US" grew an average of 2.3 percent per year. The growth of the median BLS wage at the national level is slightly understated in this case because the national level data includes GS adjusted localities that have grown slightly slower than the US as whole. In the GS adjusted localities, wages have grown an average of 2.9 percent per year and BLS wages in these same areas have grown an average of 2.1 percent per year.

Our findings indicate that GS and BLS wage growth for home health aides have tracked closely in the past both at a national level and for GS adjusted localities. This leads us to presume that any GS wage, regardless of which grade and step, will grow on a similar trajectory to median private wages for home health aides in future years.

Appendix C: Caregiver Staffing Model Assumptions

Background:

The Program of Comprehensive Assistance for Family Caregivers (PCAFC) for eligible Post-9/11 service era Veterans and the Program of General Caregiver Support Services (PGCSS) for eligible pre-9/11 service era Veterans are collectively referred to as VA's Caregiver Support Program. The PCAFC compensates the Caregivers of Veterans who separated from active duty after September 11, 2001 and meet the requirements for PCAFC.

MISSION Act, Section 161 (Expansion of Family Caregiver Program of Department of Veterans Affairs) would initially expand eligibility for VA's PCAFC to Veterans with a serious injury incurred or aggravated in the line of duty in the active military, naval, or air service on or before May 7, 1975. Eligibility will later be expanded to veterans with a serious injury incurred or aggravated in the line of duty in the active military, naval, or air service after May 7, 1975, and before September 11, 2001. Implementation of this expansion will begin in Fiscal Year (FY) 2021, in the following phases:

- First, family caregivers of Veterans who were seriously injured in the line of duty on or before May 7, 1975, will become eligible for this program.
- After 2 years, family caregivers of Veterans who were seriously injured in the line of duty between May 7, 1975, and September 10, 2001, will become eligible.

As noted in that actuarial analysis in Appendix A, there is significant uncertainty in the multi-year projections and service era expansion projections. Of importance to this staffing model Milliman noted "It is unclear how quickly VA will process these applications and what the application approval rates will be at the start of the program." Due to these uncertainties, it is highly recommended that VHA collect extensive data on the number of applications, approval rates, and per accomplishment time for each task in this staffing model for the first year following expansion of this program and update the staffing model as needed.

Assumptions:

This staffing model assumes the following workload breakdown to implement the PCFAC process map provided by the VHA Caregiver program office on June 15, 2020 (see Figure 1), using the caregiver sponsor estimates that were derived from Scenario BY19v2.2 in the actuarial analysis detailed in Appendix A.

Application Process

As reflected in PCFAC processes defined by the VHA Caregiver program office as of June 15, 2020 (see figure 1), the following workflows for this program by service area (VAMC or VISN) were modeled:

- VA Medical Center (VAMC) Caregiver Support Program (CSP)
 - Initial application processing completed at the VAMC.²⁰ All initial applicants will receive an initial intake, Veteran assessment, Caregiver assessment, and functional assessment prior to submitting application to the Consolidated Eligibility Assessment Team (CEAT) at the VISN. The model includes time for packaging applications.
 - Following the initial review of the application by the CEAT, pre-final application approval is conducted. This step includes a caregiver in-home assessment and initial caregiver training. Average per accomplishment times estimated for the inhome assessments varied to account for anticipated lengthy drive times in rural areas (four hours for urban areas and eight hours for rural areas).
 - Processing denied applications for a first and second appeal.
 - Ongoing caregiver support to ensure follow-up and ongoing support for enrolled caregivers and a semi-annual assessment conducted onsite at the VAMC.
 - Annual program eligibility reassessments.
- VHA Integrated Service Network (VISN) Consolidated Eligibility Assessment Team (CEAT)
 - The CEAT will take a brief "Initial" review of the application package to evaluate key eligibility factors. Some applications will be denied at this step while others will go back to the CSP to continue the application process. Caregiver training and the home assessment will be conducted during this step, along with any additional assessments requested by the CEAT. Once the assessments are complete, it is considered a full packet and will go back to the CEAT for a thorough review and "final" adjudication.
 - Coordination of the Veteran care plan with the VAMC CSP to ensure the needs of the Caregiver and the Veteran receive appropriate support.
 - Processing first and final appeals for disapproved applications. It was assumed that 50 percent of all disapproved applications would have a first appeal and that 50 percent of the those would be disapproved and have a final appeal.

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²⁰ Applicants that are deemed not to be eligible due to administrative reasons (i.e., service-connected disability, lack of a Veteran status, etc.) are not included as workload in this model. Clinical assessments to determine medical factors are not included in this model as those workload factors are met by VAMC staff in the appropriate clinical care area.

 Processing annual reassessments and conducting audits of ten percent of all enrolled cases per year to ensure consistency.

This staffing model assumes the following workload breakdown structure to implement the PCFAC processes as defined by the VHA Caregiver program office as of June 15, 2020 (see Figure 1).

VAMC CSP

- Position requirements modeled were licensed clinical social workers (LCSW) and Registered Nurses (RNs).
 - LCSW workload includes all aspects of application processing, initial assessments with the caregiver and the Veteran, counseling and support for applicants not approved for the program, ongoing care coordination and training for the enrolled caregiver, and required reassessments. The LCSW also intervenes as needed, to ensure timely access to clinical appointments to inform the eligibility package and final review of packages before they are submitted to the central eligibility review board.
 - RN workload includes the functional assessments, in-home assessments (initial and semi-annual), and on-site annual assessments at the VAMC.
 - Workload associated with processing of appeals for denied applications can be conducted by any clinical specialist (LCSW, RN, or other).

VISN CEAT

- Medical provider can be a doctor, nurse practitioner, or physician assistant. The medical provider has in-depth understanding of eligibility associated with VA service connections and reviews eligibility documents, as needed, to determine whether a service-connected condition meets eligibility requirement. This provider reviews Veteran's medical record summaries, most recent history, physical findings of recent testing at the facility, and care team input.
- LCSW, RN, or Licensed Mental Health Technician (LMHT) workload include review of the assessments for the caregiver, Veteran, and in-home assessments for the applications.
- Occupational Therapist/Physical Therapist (PT/OT) workload includes review of the functional need assessment.
- Psychologist workload includes reviewing medical records to determine factors impacting the mental health needs of the caregiver and Veteran.
- Any Clinical Staff functions include care coordination with the CSP staff.
- Key workload drivers for both the CSP and CEAT functions include the number of applications, denied applications (to evaluate workload for appeals), and approved applications (initial training and in-home assessment).

 Per accomplishment time was primarily developed using subject matter expertise guidance and informed by eligibility determination work rate standards.

Distribution of Aggregate Enrollment Projections to State and Facility

To allocate the aggregate level actuarial projections used in this staffing model to the VAMC level, the following steps were taken to proportionally distribute the enrolled caregivers.

- State-level data on the total FY2021 Veteran population were extracted from the
 National Center for Veteran Statistics to develop the proportion of Veterans by state.
- The percentage distribution by state of actual Caregiver enrollment was then used to distribute the aggregate projected caregiver enrollment and applications for each state for each of the three options.
- VAMC-level historical enrollment was aggregated to the state level to develop an estimated percentage of caregivers associated with a specific VAMC within the state.

Estimating applications

The number of applications was based upon the projected enrolled caregiver population as the starting point (Scenario BY19v2.2 in Appendix A). Estimates for the number of applications and attrition rates used historical data for the program. Because of the significant changes in historical approval and attrition rates, the VHA Caregiver program office was provided with three options to develop the estimates of total, disapproved, and approved applications:

- The most recent (FY2019) reported outcomes of approval rates at 7.8 percent and estimated attrition rates at 18 percent.
- The average rate for the history of the program (FY2011-FY2019) with approval rates of 37.5% and attrition rates of 10%. Range of the approval rates through this time frame was significant from 77.6% at the beginning of the program to 7.8% in 2019. Estimated attrition rates were somewhat more stable ranging from 2% in the beginning of the program to 8% in FY2019.
- The average approval rate for the first half of the program (FY2011- FY2015) with an approval rate of 55.7%, which reflects a start-up of a new program, but does not reflect more recent process changes.

At the request of the VHA Caregiver program office, given the amount of uncertainty in this program expansion the option to use the average of all years of the program was determined to be the best option at this point. Since the approval rate has such a

significant impact on the workload, the VHA Caregiver program office acknowledged the need to re-evaluate and adjust the assumptions regarding the application numbers and approval rates.

Table 1. Historical and Estimated Caregiver Enrollees with Estimated Application Counts

Year	Enrollee Count*	Delta year to year	Approved Applicant Count	Count of enrollees who left program	Attrition Rate	Denied Applications Count	Applicant Approval Rate*	Applicant Denial Rate	TOTAL Application Count
2011	2,158		2,166			624	77.6%	22.4%	2,790
2012	7,767	5,609	5,796	187	2%	2,321	71.4%	28.6%	8,117
2013	14,514	6,747	7,345	598	4%	6,201	54.2%	45.8%	13,546
2014	21,366	6,852	7,974	1,122	5%	10,580	43.0%	57.0%	18,554
2015	26,478	5,112	6,813	1,701	6%	14,287	32.3%	67.7%	21,100
2016	28,136	1,658	4,414	2,756	10%	14,576	23.2%	76.8%	18,990
2017	26,997	-1,139	2,916	4,055	15%	15,199	16.1%	83.9%	18,115
2018	24,839	-2,158	2,050	4,208	17%	15,593	11.6%	88.4%	17,643
2019	22,145	-2,694	1,367	4,061	18%	16,805	7.8%	92.5%	18,172
2020	22,556	411	4,547	4,136	18%	7,587	37.5%	62.5%	12,135
2021	43,328	20,772	28,718	7,946	18%	47,917	37.5%	62.5%	76,635
2022	51,645	8,316	17,787	9,471	18%	29,678	37.5%	62.5%	47,465
2023	63,981	12,336	24,069	11,733	18%	40,160	37.5%	62.5%	64,229
2024	72,834	8,854	22,210	13,357	18%	37,058	37.5%	62.5%	59,269
2025	74,888	2,053	15,787	13,733	18%	26,340	37.5%	62.5%	42,127

Note:

Staffing Recommendations

Overall

Because of the number of uncertainties in this program expansion, the following high-level recommendations are provided:

- Develop and actively monitor outcome measures to ascertain if the recommended staffing levels are attaining the desired outcomes for this program.
- Focus initial staffing on those sites that are experiencing the most growth in the Veteran population between FY2019 and FY2025.

Since the actuarial analysis reflects the declining population of Veterans in general and the target population for this program, it is recommended that positions have a not to exceed date in FY2025 to act as a forcing function to revisit the staffing model estimates. This should coincide with more stability in the program and the ability to collect more data to refine the per accomplishment time estimates.

^{*} Enrollee counts and historical applicant approval rates were extracted from Scenario BY19v2.2 in the actuarial analysis in Appendix A. All other information was derived based upon assumptions.

Figure 1. PCFAFC Application Process

